Environmental Assessment
Assessment of Effect
July, 2005

Expansion of Panther Junction Visitor Center
Big Bend National Park
Brewster County, Texas

U.S. Department of the Interior
National Park Service

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Summary

Big Bend National Park proposes to expand a portion of the visitor center to more efficiently serve the needs of visitors and staff. The visitor center, offices for park interpreters, sales area for the park cooperating association, and park orientation exhibits occupy a Mission 66 period building that is considered eligible for listing in the National Register of Historic Places. The sales area used by Big Bend Natural History Association has become crowded because of the increased volume and variety of items found popular with park visitors. A portion of the existing northeast wall of the visitor center would be removed and an additional 1,110 square feet of total floor space would be constructed on the northeast side of the visitor center—approximately 850 square feet of which will be public space, and approximately 260 square feet of which will be for storage and climate control equipment. Approximately 110 square feet of mechanical and storage space in the existing building will be reconfigured as public space. The existing handicap accessible restroom facility built in the 1990s and located east of the main building would be demolished. The existing integral public toilets will be reconfigured to accommodate handicap accessibility and low flow fixtures, and will increase from approximately 300 square feet to approximately 360 square feet by incorporating some existing administrative and bookstore storage space that was originally an office toilet.

This proposal would increase the total public space in the visitor center from 1110 square feet to approximately 2070 square feet, an 86% increase. The expansion would be constructed in a style compatible with the current architectural style of the building. Two new heating/cooling systems would replace the existing single original system, allowing for separate temperature control of the public and administrative spaces served by the existing system. New bookstore storage would be incorporated behind the expanded public space, to replace and augment the existing bookstore storage space.

The National Park Service considers the Panther Junction Headquarters Building to be eligible for listing on the National Register of Historic Places because it was designed by a renowned architect, Cecil Doty. However, the building has not been formally determined eligible through consultation with the Texas State Historic Preservation Office. A contextual study for evaluating the historical significance of Mission 66 cultural landscapes is in progress. Until this study is completed, a formal determination of the eligibility of the Mission 66 resources of Big Bend National Park can not be determined. A more formal site specific determination would be prepared in the future in conjunction with the Park Service Wide Mission 66 report.

The proposed action would have no impacts on soils; geology and topography; prime and unique farmland; air quality; water resources; biotic communities; threatened, endangered and candidate species and species of special concern; archeological resources, ethnographic resources, or cultural landscapes; soundscape or lightscape management; environmental justice; or the park's socioeconomic environment. Impacts to the historic structure would not be adverse. Adverse, construction related impacts to visitor use and experience and park operations would be short- term and minor in intensity. Beneficial impacts to visitor use and experience and park operations would be long- term and moderate in intensity.

Note to Reviewers and Respondents

If you wish to comment on the environmental assessment/assessment of effect, you may mail comments to the name and address below. Our practice is to make comments, including names and home addresses of respondents, available for public review during regular business hours. Individual respondents may request that we withhold their home address from the record, which we will honor to the extent allowable by law. **If you wish us to withhold your name and/or address, you must state this prominently at the beginning of your comment.** We will make all submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public inspection in their entirety.

Please Address Comments to:
John King, Superintendent
Big Bend National Park
P.O. Box 129
Big Bend National Park, TX 79834

TABLE OF CONTENTS

PURPOSE AND NEED

BRIEF DESCRIPTION OF THE PARK

The park was authorized on June 20, 1935, by an act of Congress. The enabling legislation of the park in 1944 set this park aside to provide recreational opportunities for the public. Big Bend National Park is in south Brewster County in southwest Texas in a sparsely populated area of the country (see Park Area map). Big Bend National Park encompasses more than 801,000 acres. For more than 1,000 miles, the Rio Grande forms the international boundary between Mexico and the United States. Big Bend National Park has national significance as the largest protected area of Chihuahuan Desert topography and ecology in the United States. Along with the Maderas del Carmen and Cañon de Santa Elena, Big Bend is part of one of the largest trans- boundary protected areas in North America. Few areas exceed the park's value for the protection and study of geologic and paleontologic resources. Cultural resources in the park range from the Paleo- Indian period 10,500 years ago through the historic period (mid 1500s to the present) represented by American Indian groups, such as the Chisos, Mescalero Apache, and Comanche. More recently, Spanish, Mexican, and American settlers farmed, ranched, and mined in the area.

The park exhibits dramatic contrasts. Its climate may be characterized as one of extremes. Dry, hot, late spring and early summer days often exceed 100°F in the lower elevations. Winters are normally mild throughout the park, but subfreezing temperatures occasionally occur. Because the altitude ranges from about 1,800 feet along the river to over 7,800 feet in the Chisos Mountains, a wide variation in moisture and temperature exists throughout the park. These variations contribute to an exceptional diversity in plant and animal habitats. These ecological and environmental extremes present challenges to park visitors who depend upon sound advice from park staff to provide them the means of a quality experience. Annual visitation to the park has averaged 300,000 in recent years. The 1992 Visitor Services Project determined that most visitors were 41 years of age or older. Most visitors came to the park in family groups. Visitors from foreign countries comprised 10% of park visitation, with 48% of the international visitors coming from Germany. Americans came from Texas (65%), with smaller numbers from other states. The average length of stay, three days, is higher than most other national park system areas.

PURPOSE

The 2004 General Management Plan (GMP) for Big Bend National Park indicated that at Panther Junction, the visitor center space is inadequate. The building is often crowded. There is insufficient space for exhibits to introduce aspects of the primary interpretive themes and to provide adequate information for visiting sites in the park. The bookstore has grown into the lobby space, which aggravates the overcrowding. In addition, it is critical to provide visitors with safety information to enable visitors to safely enjoy the park's beauty and not have their visit marred by accident or injury. Currently, the visitors can, with effort, gain the necessary information, but an expanded facility would provide a more efficient and effective mechanism for both distributing materials and face- to- face contact with visitors.

The statement in the GMP regarding construction of a new visitor center is still accurate. The park would continue to compete for a priority within the NPS Line- Item Construction funding

program and attempt to secure the necessary funding for a new facility. It would no doubt take several years to successfully compete for funding through that process. The interim expansion of the existing visitor center that is evaluated in this environmental assessment is a stop- gap measure to address the woefully inadequate space currently available to meet even the most basic visitor service needs.

This expansion project has been under consideration for several years now and was envisioned even as the new GMP was being prepared. The thought has always been that this project would address short- term needs while a longer term solution - - i.e. a new visitor center - - was being pursued. When a new visitor center is constructed at some point in the future our current facility would be converted to administrative use space as indicated in the GMP.

Initial in- park scoping to identify needs resulted in the following project objectives.

- create additional bookstore sales area and expand the numbers and variety of educational materials for the public
- provide expanded visitor contact desk and improve visitor movement in the lobby
- reorganize the exhibit space and provide new orientation exhibits for varied age groups and learning styles
- continue to provide ADA handicap accessible restroom facilities and avoid impairment of park resources
- insure that renovation is architecturally and aesthetically compatible with the current Mission- 66 era building and minimize the demolition of original materials
- minimize the footprint of disturbance to the natural environment

NEED

In the 1960s, when the visitor center was originally designed and built, there was a yearly visitation of about 90,000 and the number of visitors using the visitor center was about 30,000. In 2004, the total park visitation averages between 300,000 and 340,000. In 2004, the count of visitors using the Panther Junction Visitor Center was 132,102 or about one third of the total park visitation. This is a fourfold increase over what the center was designed to accommodate. The high periods of visitation occur at holidays throughout the year, with major peaks in November and December and in the spring break season. Visitor center use reaches a climax during the spring break period, and tapers off after Easter. These busy periods represent about 40% of the total operational time for the visitor center.

During spring break, the load of visitation far exceeds the capacity of the visitor center. The park currently has to accommodate demand for backcountry camping and hiking permits by shifting the permit desk to the community meeting room. This frees up the visitor center lobby for general information and literature sales. Even by shifting the permit issuance to another room, the crowding at the visitor center desk is very difficult to manage. The noise level is high, making hearing difficult, and the press of people creates high stress for employees as well as visitors who cannot be met in a timely manner. The contact desk needs to be expanded to provide separate areas for fee collection, literature sales, and for answering questions and providing general information. The expanded desk would also have a handicapped accessible space. An expanded

information desk would relieve the crowding of the existing desk and would provide visitors with a more comfortable and relaxed atmosphere. By relieving the crowding at the desk, the level of confusion would be lower, it would provide for easier hearing and for understanding the communication of information.

Information and directional signs are closely spaced and the general appearance is cluttered and confusing. The occasional crowding in the visitor center contributes to the confusion and noise.

A strong architectural design feature of Mission 66 uses large windows to allow exterior light to flood the interior spaces and create a subtle connection with the outdoor environment. In the sales area, one section of windows has been blocked by sales items, preventing the entrance of light and also blocking the view of the front parking lot from the front desk. Quite often, visitors arrive in vehicles that are inappropriate for use on certain park roads and a clear view of the parking lot allows the contact ranger to see the kinds of vehicles the visitors are driving. This enables the ranger to advise visitors about road hazards for their particular type of vehicle.

In another area, sales displays cover NPS exhibit panels. An air quality monitoring and interpretive display covers one of the main windows with a north view. This crowded condition cumulatively creates a cluttered and disorganized condition that detracts from the visitor experience and diminishes the appreciation of the subtle architectural qualities for which the lobby was originally designed. By expanding the sales area and moving it from its present location into the proposed "wing," the focus when one enters the lobby area would again be the NPS contact desk, which was the original intent of the building design.

One purpose of the visitor center exhibit area is the passive interpretation of the park's natural and cultural history. The existing natural and cultural history exhibit panels have abbreviated text and lack substantive information. Objects, plants and animals displayed in the exhibit panels are identified in labels written in both English and Spanish. However, many of the "Spanish" names were literal translations that do not carry the name of the plant or animal as spoken by native speakers. For example, the Big Bend Bluebonnet is translated as *"Planta bluebonnet (bonete azulejo) del Parque Big Bend,"* but is recognized by our Mexican neighbors by its true Spanish name *Espuela del Caballero*, or "Cowboy's spur."

The Founders Walk outside the northeast corner of the building honors the early settlers who owned land that eventually became Big Bend National Park. The path directs visitors to a series of anodized metal interpretive signs mounted on attractive rock pedestal bases. However, the rustic design of these rock bases is reminiscent of the C.C.C. era, rather than the Mission 66 and thus, is incompatible. This short interpretive path is poorly planned, confusing, and inadequately serves visitors. The exterior handicap accessible restroom building that was added after the walk was established now detracts from the interpretive walk. The major problem with the interpretive walk is that there is no clear end to the path and visitors wander around to the rear of the administrative building searching for more interpretive signs.

The proposed expansion of the visitor center lobby would extend across this entire area, requiring the removal of the 1990s era handicap accessible restroom, all the interpretive signs for the Founders Walk and the concrete sidewalk that occupies the area of construction. If the exhibit is reestablished at a future date, it would be redesigned and ultimately displayed in a new

setting – a small plaza or patio (The Founder's plaza) with seating and porcelain enamel exhibits, similar to the CCC plaza in the Chisos Basin. It is envisioned that this plaza would be placed in the corner created by the expansion "wing" at the northeast corner of the visitor center.

The 1990s exterior handicap accessible restroom building would be removed to allow room for the expansion of the visitor center lobby. The original restrooms at the front of the visitor center would be modified and slightly enlarged to provide handicapped accessibility.

SCOPING

Scoping is an early and open process to determine the breadth of environmental issues and alternatives to be addressed in an environmental assessment/assessment of effect. Big Bend National Park conducted both internal scoping with appropriate National Park Service staff and external scoping with the public and interested and affected groups and agencies.

Internal scoping was conducted by the staff of Big Bend National Park and resource professionals of the National Park Service's Santa Fe and Denver support offices. This interdisciplinary process defined the purpose and need, identified potential actions to address the need, determined what the likely issues and impact topics would be, and identified the relationship, if any, of the proposed action to other planning efforts at the park.

Both a news release and a public service announcement describing the proposed action were issued on February 23, 2005 to 55 newspapers throughout the state of Texas, including the local Alpine Avalanche (Appendix # 1). American Indian tribes traditionally associated with the lands of Big Bend National Park and others with whom park staff regularly consult were also apprised by letter of the proposed action on February 23, 2005. (Appendix # 2).

Comments were solicited during external scoping until March 23, 2005 and three letters were received. The U.S. Fish and Wildlife Service stated that the proposed project site is not located within designated critical habitat of any federally listed threatened or endangered species, and further recommended that subject matter experts survey the project area. The park Botanist and Wildlife Specialist both surveyed the area and their findings are reflected within this document. The United States International Boundary and Water Commission (USIBWC) found that the project will not impacts upon projects of the USIBWC. One letter was received from a private citizen who objected to the use of public funds for such a project and recommended that the park use its funds for other purposes. The majority of the letter was unrelated to the project under consideration.

The undertakings described in this document are subject to §106 of the National Historic Preservation Act, as amended in 1992 (16 USC 470 *et seq*.). This environmental assessment/assessment of effect would also be submitted to the Texas SHPO for review and comment to fulfill Big Bend National Park's obligations under §106 (36 CFR 800.8[c], *Use of the NEPA process for section 106 purposes*.

RELATIONSHIP OF THE PROPOSED ACTION TO PREVIOUS PLANNING EFFORTS

The 2004 GMP states that at Panther Junction, a new visitor center would be built to provide comprehensive interpretation of the park's interpretive themes. This interim expansion project was envisioned even as the new GMP was being prepared and the statement in the GMP regarding construction of a new visitor center is still accurate. It would no doubt take several years to successfully compete for funding for such a large construction project and the interim expansion of the existing visitor center that is evaluated in this environmental assessment is a stop- gap measure to address the immediate needs for adequate space to meet even the most basic visitor service needs.

The proposed project is supported by the Government Performance and Results Act of 1993, Goal Category II: Provide for the Public Enjoyment and Visitor Experience of Parks; and is specifically supported by Mission Goal IIa: Visitors safely enjoy and are satisfied with the availability, accessibility, diversity, and quality of park facilities, services, and appropriate recreational opportunities.

The proposed project is supported by Theme A of the Comprehensive Interpretive Plan (CIP) which reads "The convergence of desert, mountain, and river ecosystems in Big Bend National Park supports a remarkable diversity of life and provides abundant opportunities to experience and learn about the natural world." The Panther Junction Visitor Center expansion and exhibits would focus its interpretation around the theme of the three distinct environments of the park as stated in Theme A of the CIP. The goal would be to orient and educate visitors about the uniqueness of Big Bend as exemplified by its diverse habitats, wildlife, plant communities, and environments.

IMPACT TOPICS

Issues and concerns affecting the proposed action were identified by specialists in the National Park Service. Impact topics are the resources of concern that could be affected by the range of alternatives. Specific impact topics were developed to ensure that alternatives were compared on the basis of the most relevant topics. The following impact topics were identified on the basis of federal laws, regulations, orders, and National Park Service *Management Policies, 2001*. A brief rationale for the selection of each impact topic is given below, as well as the rationale for dismissing specific topics from further consideration.

Impact Topics Analyzed in This Environmental Assessment/Assessment of Effect

Historic Structures/Buildings: The National Historic Preservation Act, as amended in 1992 (16 USC 470 *et seq*.); the National Environmental Policy Act of 1969 (42 USC 4321 *et seq*.); and the National Park Service's Director's Order #28, *Cultural Resource Management Guideline (1997)*, *Management Policies, 2001* (2000), and Director's Order #12, *Conservation Planning, Environmental Impact Analysis, and Decision Making* (2001) require the consideration of impacts on historic structures and buildings listed in or eligible for listing in the National Register of Historic Places.

The Mission 66 program was a large- scale development program initiated by the National Park Service to improve park infrastructure and interpretation opportunities for the ever increasing

number of visitors. The program was initiated in 1956 with the goal of completing the improvements in time for the National Park Service anniversary in 1966. As part of the Mission 66 program, a flurry of construction took place in developed areas at Panther Junction, Rio Grande Village, and the Chisos Basin.

Mission 66 represents the largest initiative in National Park Service history for park improvements and expansion. Director Conrad Wirth proposed the ten year project to revitalize the parks for the fiftieth anniversary of the park service, 1966. Mission 66 plans included a change in traditional park design in order to accommodate and educate the increased numbers of park visitors following WWII. A new building type, the visitor center, became common, as did increased interpretation opportunities, campsites, trails, picnic grounds, auditoriums, restrooms, and accommodations for private automobiles. Modern forms of materials were used in Mission 66 construction, also called "Park Service Modern" architecture, marking a distinctive break from the natural materials previously used in the "Park Service Rustic" style. Materials such as textured concrete with panels of stone veneer, painted steel columns, and flat roofs with projecting flat terraces were common. Education and comfort of the visitor were the main priority (Allabeck 2000).

The National Park Service recognizes that while not yet 50 years old, as generally required under National Register standards, Mission 66 development may have historical significance. A contextual study for evaluating the historical significance of Mission 66 cultural landscapes is in progress. Until this study is completed, a formal determination of the eligibility of the Mission 66 resources of Big Bend National Park can not be determined. A more formal site specific determination would need to be prepared in conjunction with the Park Service Wide Mission 66 Report in the future.

Museum Collections: The National Park Service's *Management Policies, 2001* (2000) and Director's Order #28, *Cultural Resource Management Guideline (1997)* require the consideration of impacts on museum collections (historic artifacts, natural specimens, and archival and manuscript material).

Along the northwest wall of the lobby, as visitors enter the lobby, are exhibit panels describing the natural and cultural resources of the park. Along the northeast wall are exhibit panels containing replicas of fossils and murals depicting ancient environments that once existed in the area. These exhibits contain 83 objects from the park's museum collection. These objects would be relocated back into the museum collection until such time as an exhibit plan is developed for their continued display. A large portion of the current exhibit space is consumed by paleontological exhibits containing replicas of fossil specimens. The park is currently considering the possibility of providing visitors with a separate exhibit building that would focus upon paleontological resources and it is possible that some of the replicas of fossil specimens could be used in an exhibit of that nature. Thus the removal of those specimens from the visitor center would not be permanently withdrawn from public appreciation.

During the proposed remodel, the exhibit panels would be removed, and new exhibits would be placed in the expansion area. Because the objects from the park's museum collections would be affected by the proposed action, museum collections will be addressed as an impact topic.

Visitor Use and Experience: Big Bend National Park is open year round. The park averages between 300,000 and 340,000 (and has been as high as 474,000). The current building was constructed in 1962 and designed to accommodate the needs of that day. That design accommodated fewer park functions, a smaller park staff and a park annual visitation of slightly more than 90,000 people – numbers that have increased as time passed. In 2004, the count of visitors using the Panther Junction Visitor Center was 132,102 or about one third of the total park visitation. This is a fourfold increase over what the center was designed to accommodate. The high periods of visitation occur at holidays throughout the year, with major peaks in November and December and in the spring break season. Visitor center use reaches a climax during the spring break period, and tapers off after Easter. These busy periods represent about 40% of the total operational time for the visitor center. The average length of stay in the park is three days.

Construction of a new visitor center building as mentioned in the 2004 GMP would allow for the conversion of the old structure into much needed office space for current and future park staff. The statement in the GMP regarding construction of a new visitor center is still accurate. The interim expansion of the existing visitor center that is evaluated in this environmental assessment is a stop- gap measure to address the woefully inadequate space currently available to meet even the most basic visitor service needs. This expansion project has been under consideration for several years now and was envisioned even as the new GMP was being prepared. The thought has always been that this project would address short- term needs while a longer term solution - - i.e. a new visitor center - - was being pursued. When a new visitor center is constructed at some point in the future our current facility would be converted to administrative use space as indicated in the GMP.

This environmental assessment/assessment of effect evaluates the possible expansion of the existing visitor center. Some changes would occur in how information is presented to park visitors. The existing exhibits would be removed and replaced with exhibits designed to orient visitors to the various environmental zones of the park. Museum objects currently on display in the visitor center would be temporarily relocated back into the museum collection. The park is currently considering the possibility of providing visitors with a separate exhibit structure that would focus upon paleontological resources and it is possible that some of the replicas of fossil specimens could be used in an exhibit of that nature. Thus the removal of those specimens from the visitor center would not be permanently withdrawn from public appreciation.

The visitor center lobby expansion would require removal of the Founders Walk, the dismantling the exiting 1990s era handicap accessible restroom on the exterior of the visitor center, and the modification of the original restrooms to handicap accessibility standards. Because remodeling the interior of the visitor center, which includes a lobby, information desk, and handicapped accessible restrooms, would impact visitor use and experience at Big Bend National Park, visitor use and experience will be addressed as an impact topic in this environmental assessment/assessment of effect.

Park Operations: The visitor center (lobby, information desk, and handicapped accessible restrooms) also includes a small interpretive office, and a book sales area. The employee office space immediately behind the visitor contact desk would be reduced in size to create additional desk space in the new design.

The existing HVAC (air conditioning and heating) system would be replaced and during the interim of construction, visitors and park staff would be without HVAC. The existing HVAC system serves the entire front bank of offices in the administration building. When the visitor center is crowded with people, the HVAC system must run constantly to properly cool or heat the visitor center lobby. This causes the HVAC system to push excessive heating or cooling to the other offices along the front of the administration building, creating unpleasant fluctuations that adversely affect employees working in those offices. Additionally, the existing HVAC equipment is approximately SEER- 6 rated; very poor from an energy consumption standpoint. This single unit would replaced by two separate units to serve the two functional areas. These units would be more energy efficient, contributing to the NPS thrust for sustainability. Because remodeling the interior of the visitor center would involve installing separate HVAC systems, and because the remodeling would alter the space allocated to staff use of a non- visitor contact room in the building, park operations will be addressed as an impact topic in this environmental assessment/assessment of effect.

Impact Topics Dismissed From Further Analysis

Soils: According to the National Park Service's Management Policies, 2001, the National Park Service will strive to understand and preserve the soil resources of park units and to prevent, to the extent possible, the unnatural erosion, physical removal, or contamination of the soil, or its contamination of other resources.

The predominant soil type in the area of the visitor center/museum is Chilicotal- Monterosa association, rolling, a deep, very gravelly and cobbly soil on rolling uplands. Monterosa soils make up about 20 percent of the unit. They are on the convex ridgetops. Monterosa soils are well drained, surface runoff is medium, and permeability is moderate.

Site preparations during construction of the existing visitor center used the cut- and- fill method, i.e., by cutting into the slope and leveling outward. Thus the rear of the building was set down into the slope to a depth of about five feet and the front of the building rests on fill material that was derived from the excavation for the building site. Drainage was contoured away from the building using fill material. When the handicap accessible toilet building was constructed northeast of the visitor center, the slope northeastward toward the main road was disturbed and then rehabilitated following construction. The expansion of the existing facility would not extend beyond the existing disturbance and no additional soil disturbance is expected. Therefore, soils are dismissed from further analysis as an impact topic.

Geology and Topography: National Park Service's *Management Policies, 2001* (2000) require the protection of significant geologic and topographic features. Big Bend National Park is in the southern portion of Brewster County, adjacent to the international border with Mexico. The regional topography is characterized by a long geological record of change, from Paleozoic mountain ranges, to being covered by Cretaceous age seas; to Laramide Basin and Range faulting and to Tertiary age igneous and volcanic upheaval. Few areas exceed the park's value for the protection and study of geologic and paleontological resources. Cretaceous and Tertiary fossils exist in variety and abundance. The geologic features and Cretaceous and Tertiary fossils in Big Bend National Park furnish opportunities to study the sedimentary and igneous processes.

No unique geologic features or paleontological resources occur at the site of the visitor center and the expansion of the center would have no effect on these resources. Therefore, Geology and Topography are dismissed from further analysis as an impact topic.

Prime and Unique Farmlands: In August, 1980, the Council on Environmental Quality (CEQ) directed that federal agencies must assess the effects of their actions on farmland soils classified by the U.S. Department of Agriculture's Natural Resource Conservation Service as prime or unique. Prime or unique farmland is defined as soil which particularly produces general crops such as common foods, forage, fiber, and oil seed; unique farmland produces specialty crops such as fruits, vegetables, and nuts. No soils or landforms in Big Bend National Park have been classified as Prime and Unique Farmlands. (United States Department of Agriculture, Soil Conservation Service, 1985) Therefore, the topic of prime and unique farmland was dismissed as an impact topic.

Air Quality: Section 118 of the 1963 Clean Air Act (42 U.S.C. 7401 *et seq*.) requires a park unit to meet all federal, state, and local air pollution standards. Big Bend National Park is designated a Class I air quality area under the Clean Air Act, as amended. Hauling material, operating equipment, and other construction activities could result in temporarily increased vehicle exhaust and emissions. However, hydrocarbons, NO_x, and SO_2 emissions, as well as any airborne particulates created by fugitive dust plumes, would be rapidly dissipated by air drainage because air stagnation is rare at the project site. Overall, there could be a negligible degradation of local air quality; however, such effects would be temporary, lasting only as long as construction. Big Bend National Park's Class I air quality would not be affected by the proposal. Therefore, air quality was dismissed as an impact topic.

Water Resources (Water Quality, Wetlands, and Floodplains): National Park Service policies require protection of water quality consistent with the Clean Water Act. Section 404 of the Clean Water Act authorizes the U.S. Army Corps of Engineers to prohibit or regulate, through a permitting process, discharge of dredged or fill material or excavation within U.S. waters.

According to the Natural Resource Conservation Service (NRCS), no soils in the project area are classified as hydric soils. According to the park water source database, no springs or other natural water sources are located in the project area. No wetland vegetation was observed during the field survey of the proposed site. Because no water sources, wetlands or floodplains exist at the project site, Water Resources were dismissed as an impact topic.

Biotic Communities: The National Environmental Policy Act of 1969 (42 USC 4321 *et seq*.) calls for an examination of the impacts on all components of affected ecosystems. National Park Service policy is to maintain all the components and processes of naturally evolving park unit ecosystems, including the natural abundance, diversity, and ecological integrity of plants and animals (National Park Service *Management Policies,2001*).

None of the alternatives presented involve new significant disturbance of native ecosystems. The project area has been disturbed multiple times in the past, including the initial visitor center construction, utility construction and maintenance, and the construction of ADA- compliant restrooms. Any small disturbed areas resulting from either alternative would be landscaped with native vegetation and would be soon re- colonized with a native micro- and meso- fauna similar

to that currently existing on- site. The scope, duration, and intensity of these effects are considered negligible. Therefore, biotic communities was dismissed as an impact topic.

Threatened, Endangered, and Candidate Species and Species of Special Concern: The Endangered Species Act (1973) requires an examination of impacts on all federally- listed threatened or endangered species. National Park Service policy also requires examination of the impacts on federal candidate species, as well as state- listed threatened, endangered, candidate, rare, declining, and sensitive species. Current vegetation consists largely of native Chihuahuan Desert thornscrub, dominated by succulents (e.g. yucca, cactuses), shrubs (e.g. creosotebush, acacia, and sumac), a few grasses, and small mesquite trees. Much of this vegetation had been disturbed by past construction and is a mixture of native recruits and individuals planted for landscaping. Several non- native plants have been unintentionally introduced in the project site and form a minor component of the flora.

No Threatened, Endangered, or Candidate plant species occur in the project area. The Federally listed Threatened and Endangered plant species known to occur in Big Bend National Park are 1) Chisos hedgehog cactus, 2) mariposa cactus, and 3) bunched cory cactus. Two of these species are limestone endemics, with no known populations within 10 miles of Panther Junction. Chisos hedgehog cactus is known to occur on soils similar to those on the project site, but at much lower elevations. Guadalupe fescue, a Candidate species managed under a Cooperative Agreement with the USFWS, occurs only at one forested site the Chisos Mountains.

Wildlife

The Chihuahuan Desert is home to many species of birds, mammals, reptiles, and amphibians. Habitat types vary greatly depending on elevation and proximity to water sources.

Wildlife in the Panther Junction vicinity are typical of mid- elevation sotol grassland and arroyo habitats, and are influenced by nearby Chisos Mountain slopes and canyons. Common birds include cactus wren, curve- billed thrasher, scaled quail, Says phoebe, roadrunner and mockingbird. Mammals diversity includes mule deer, javelina, striped skunk, desert cottontail, grey fox, and occasional black bear. Reptiles found in the area include the common Southwestern earless lizard, crevice spiny lizard, patch- nosed snakes, diamond- back and black- tailed rattlesnakes, and the Trans- Pecos rat snake. Red- spotted toads emerge during rainy periods and canyon tree frogs inhabit nearby canyons.

Of the three federally- listed wildlife species in Big Bend National Park, only the Mexican long-nosed bat may occasionally visit Panther Junction as they forage for nectar available from late spring and early summer- blooming century- plant agaves. Few naturally occurring century plants occur at this elevation, but the showy plant has prompted planting of the agave in the developed Panther Junction area landscape, including adjacent to the Visitor Center. However, the small number of plants surrounding the Panther Junction visitor center represents an extremely minor percentage of foraging habitat and the project would have a negligible and short term affect on the species foraging ability. The rehabilitation and revegetation following construction would include replanting agaves that were salvaged from the area or replacing them with additional new plants.

Nesting endangered black- capped vireos have been documented in a nearby vegetated canyon, approximately one- half mile southwest of Panther Junction but the project would have a negligible and short term effect on the species.

State- listed species that may occasionally be seen in the Panther Junction area include the state- endangered peregrine falcon and state- threatened zone- tail hawk as they occasionally fly over the area during long- distance hunting forays. Construction related noise could potentially disturb transient bird species but such adverse impacts would be temporary, lasting only as long as construction, and negligible, because suitable habitat for transient birds is found throughout the region. Therefore, the topic of threatened, endangered, and candidate species and species of special concern was dismissed as an impact topic. This environmental assessment/assessment of effect will be submitted to the US Fish and Wildlife Service, Fort Worth field office, for review and comment.

Archeological Resources: The area immediately surrounding the existing visitor center has been inspected for presence of archeological resources during several previous construction and maintenance related projects. The site of the visitor center has been extensively disturbed by past construction activities associated with the cut- and- fill leveling and preparation of the foundation for the visitor center, the construction of a handicap accessible toilet building and subsequent recontouring and landscaping, and by general ground disturbance from trenching associated with the upgrading of utility lines into the building. Archeological monitoring of construction work has been done throughout the Panther Junction developed area. This monitoring has located archeological remains elsewhere, and observations of soil characteristics throughout the area suggest which soils probably contain significant archeological remains. Construction and maintenance activities around the visitor center since the 1980s have been monitored by an NPS archeologist and no archeological resources have been observed or documented. The original construction of the visitor center reached greater depths into the Monterosa soil than archeological remains have been recorded. Therefore, archeological resources will not be addressed as an impact topic in this document.

Ethnographic Resources and Cultural Landscapes: The National Historic Preservation Act, as amended in 1992 (16 USC 470 *et seq*.); the National Environmental Policy Act of 1969 (42 USC 4321 *et seq*.); and the National Park Service's Director's Order #28, *Cultural Resource Management Guideline (1997)*, *Management Policies, 2001* (2000), and Director's Order #12, *Conservation Planning, Environmental Impact Analysis, and Decision Making* (2001) require the consideration of impacts on ethnographic resources and cultural landscapes listed in or eligible to be listed in the National Register of Historic Places.

Ethnographic Resources: Ethnographic resources are defined by the National Park Service as any "site, structure, object, landscape, or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it" (Director's Order # 28, *Cultural Resource Management Guideline*, 191). American Indian tribes traditionally associated with the lands of Big Bend National Park and others with whom park staff regularly consult were provided with the public scoping letter dated February 23, 2005. No comments were received from any of the seven American Indian tribes.

During previous consultation with American Indian tribes traditionally associated with the lands of Big Bend National Park, the Comanche Nation representatives expressed a concern about how tribal perspectives are interpreted to the public. American Indian tribes will be consulted during future development of interpretive exhibits and their input will be sought. Copies of the environmental assessment/ assessment of effect will be forwarded to each affiliated tribe or group for review and comment. Because no ethnographic resources would be affected, and because appropriate steps would be taken to protect any human remains, funerary objects, sacred objects, or objects of cultural patrimony inadvertently discovered, ethnographic resources was dismissed as an impact topic.

Cultural Landscapes: According to the National Park Service's *Cultural Resource Management Guideline* (DO- 28), a cultural landscape is

> …a reflection of human adaptation and use of natural resources and is often expressed in the way land is organized and divided, patterns of settlement, land use, systems of circulation, and the types of structures that are built. The character of a cultural landscape is defined both by physical materials, such as roads, buildings, walls, and vegetation, and by use reflecting cultural values and traditions.

Thus, cultural landscapes are the result of the long interaction between man and the land, the influence of human beliefs and actions over time upon the natural landscape. Shaped through time by historical land- use and management practices, as well as politics and property laws, levels of technology, and economic conditions, cultural landscapes provide a living record of an area's past, a visual chronicle of its history. The dynamic nature of modern human life, however, contributes to the continual reshaping of cultural landscapes; making them a good source of information about specific times and places, but at the same time rendering their long- term preservation a challenge.

A reconnaissance visit to the park by architectural historian Ethan Carr resulted in the opinion that Big Bend's Mission 66 designed landscape is prototypical of the Mission 66 era. In lieu of having a designated Mission 66 Cultural Landscape, the NPS must consider all components of the designed landscape as potentially eligible until determined otherwise.

Implementation of the proposed action would affect only the visitor center building and the immediate view of the architecture from only one side of the building. The architectural design principles that characterize the Mission 66 visitor center would be preserved in the proposed project. Compatible materials, architectural features, and design would compliment rather than detract from the original historic appearance of the building. The original visitor center had no associated landscape planting plan for the immediately surrounding grounds. The vegetative plantings that have been placed on the visitor center grounds since original construction of the visitor center have through time, been replaced with other native species common to the Panther Junction area. Vegetative plantings surrounding the building would be sensitively restored to match the existing landscape. The Founders Walk is a non- historic interpretive feature added in recent decades and it would be replaced by a small unobtrusive plaza or courtyard at the northeast corner of the visitor center. Its design would incorporate Mission 66 architectural principles, but would be visually identifiable as a non- historic construction.

The overall character of the Mission 66 developed area landscape would not be altered. The proposed project would not alter the topography, circulation features, spatial organization, or land use patterns of the landscape, and any adverse impacts associated with the visitor center expansion would be long- term but negligible. In addition, any visual, audible, and atmospheric intrusions associated with construction would be temporary and negligible, lasting only as long as construction. Because the integrity of the existing landscape would be unaffected, cultural landscapes was dismissed as an impact topic.

Indian Trust Resources: Secretarial Order 3175 requires that any anticipated impacts to Indian trust resources from a proposed project or action by Department of Interior agencies be explicitly addressed in environmental documents. The federal Indian trust responsibility is a legally enforceable fiduciary obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights, and it represents a duty to carry out the mandates of federal law with respect to American Indian and Alaska Native tribes.

There are no Indian trust resources in Big Bend National Park. The lands comprising the park are not held in trust by the Secretary of the Interior for the benefit of Indians due to their status as Indians. Therefore, Indian trust resources was dismissed as an impact topic.

Soundscape Management: In accordance with National Park Service *Management Policies* (2001) and Director's Order #47, *Sound Preservation and Noise Management*, an important part of the National Park Service mission is preservation of natural soundscapes associated with national park units. Natural soundscapes exist in the absence of human- caused sound. The natural ambient soundscape is the aggregate of all the natural sounds that occur in park units, together with the physical capacity for transmitting natural sounds. Natural sounds occur within and beyond the range of sounds that humans can perceive and can be transmitted through air, water, or solid materials. The frequencies, magnitudes, and durations of human- caused sound considered acceptable varies among National Park Service units, as well as potentially throughout each park unit, being generally greater in developed areas and less in undeveloped areas.

Hauling material, operating equipment, and other construction activities could result in dissonant, human- caused sounds. However, all construction activity would occur in the Panther Junction developed area, where protection of a natural ambient soundscape and/or opportunity for visitors to experience natural sound environments is not an objective. Any dissonant sounds associated with construction would be temporary, lasting only as long as the construction activity generating the sound, and would negligibly impact visitor enjoyment of the park. Because dissonant, construction- related sounds would have adverse but short- term and negligible impacts on visitor enjoyment of the park, soundscape management was dismissed as an impact topic.

Lightscape Management: In accordance with National Park Service *Management Policies* (2001), the National Park Service strives to preserve natural ambient landscapes, which are natural resources and values that exist in the absence of human caused light. Big Bend National Park strives to limit the use of artificial outdoor lighting to that which is necessary for basic safety requirements and to ensure that all outdoor lighting is shielded to the maximum extent

possible, to keep light on the intended subject and out of the night sky. Interior lighting would be designed and placed where it would not pose a visual intrusion when viewed from the exterior. The proposed action does not require additional outdoor lighting, and would not affect the existing exterior lighting of the visitor center or parking area. Therefore, lightscape management was dismissed as an impact topic.

Socioeconomic Environment: The action would increase sales opportunity for the Big Bend Natural History association. The Big Bend Natural History Association (BBNHA) has worked closely with the park concessioner, Forever Resorts, to insure that the kinds of sales items sold by each business are distinctly different, to avoid adverse competition. Forever Resorts provides a different kind of service to park visitors. The increased sales area acquired by BBNHA would affect only BBNHA and would not affect Forever Resorts. The proposed action would neither change local and regional land use nor appreciably impact local businesses or other agencies. Therefore, socioeconomic environment was dismissed as an impact topic.

Environmental Justice: According to the Environmental Protection Agency, environmental justice is the fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.

Presidential Executive Order 12898, "General Actions to Address Environmental Justice in Minority Populations and Low- Income Populations," requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing the disproportionately high and/or adverse human health or environmental effects of their programs and policies on minorities and low- income populations and communities. The proposed action would not have disproportionate, adverse health or environmental effects on minorities or low- income populations or communities as defined in the Environmental Protection Agency's Draft Environmental Justice Guidance (July 1996) because the project benefits all groups equally. Therefore, environmental justice was dismissed as an impact topic.

ALTERNATIVES

ALTERNATIVE A – NO ACTION

Under the no action alternative the interior of the visitor center would not be remodeled to improve visitor flow and provide adequate sales area and work space for BBNHA staff and the park interpretive staff.

During high visitation, the area adjacent to the visitor center information desk would remain crowded and noisy, hindering the service the park staff can offer visitors. Visitors would still be confused as to which register to approach to pay entrance fees or to make book purchases, which in turn can confuse staff attempting to do both, creating errors in accounting for both BBNHA and NPS fee collection revenues.

Sales area shelving would continue to cover the front window in that portion of the lobby and obstruct views of the parking lot and would continue to prevent exterior light to enter the sales area and lobby.

The existing handicap accessible restroom would remain on the northeast side of the visitor center as a separate building. The Founders Walk would remain in its present location and visitors would continue to walk past the end of the last exhibit panel searching for additional interpretive signs until they reached the employee parking lot at the rear of the administrative building.

ALTERNATIVE B – PREFERRED ALTERNATIVE

The overall design concept was generated through a discussion of alternatives with the current head of the NPS Mission 66 review panel, who is a qualified historical architect. The head of the review panel continues to offer assistance regarding material choices and smaller aspects of the design.

The lobby area would be expanded. According to the preliminary design for the project (Sheet A- 2, Administration Building Addition/Renovation), this expansion would extend northeastward from the northeast wall of the existing lobby. The existing windows on the northeast corner would remain because a significant feature of Mission 66 design incorporated large window panes allowing exterior light to illuminate interior spaces. The expansion would extend 26 feet outward just behind these windows and approximately 43 feet southward toward the rear of the administration building, creating an additional space of 1,110 square feet. By creating a new sales area, the sales racks that currently cover one set of windows would be relocated, allowing natural light to once again enter the lobby area through those windows.

Approximately 25 feet of the existing northeast wall of the lobby and HVAC room would be removed to create an opening that would allow passage between the existing lobby interior and the additional lobby space provided by the expansion. The existing (labeled on Sheet A1, Administration Building Existing Floor Plan- - Demolition) storage and mechanical room's gypsum board walls and interiors would be gutted and incorporated into the new combined lobby space. The existing ceiling and flooring in the lobby would be removed and replaced with a mostly suspended ceiling and new carpet- tile flooring system, respectively.

The single HVAC system that currently serves the entire suite of offices along the front of the administration building would be replaced by two separate HVAC systems that would serve the two different functional areas (visitor center lobby versus administration offices).

An automated fee payment machine would be installed near the front entrance of the lobby by setting it into the location of the existing glazing immediately right of the lobby entrance doors, for public fee payments during and after hours.

The existing main public toilets would be gutted, resized slightly, and reconfigured to allow integral handicapped use of the original main toilet space. Exterior disturbance related to the toilet reconstruction is limited to increasing the exterior toilet doorway widths by saw cutting the concrete fascia for new door frames only. The existing U.S. Postal Service stamp machine

near the men's room would be installed just beyond the existing front porch/ramada slab, in a masonry veneered housing.

Interim handling of visitor services would be required when the existing lobby and toilets are undergoing reconstruction. The scheduling and specifics of such handling have yet to be worked out in detail. Current thinking is that the existing original toilet would be reconstructed and completed prior to the demolition of the existing handicap accessible toilet/construction of the expanded lobby area. In this manner there would be fewer total days of visitor disruption. The exact phasing of demolition and/or reconstruction and/or new construction would be delineated prior to the contractor beginning work. The exact phasing would be driven by a combination of visitor convenience, employee convenience, and economics of performing the required phasing.

If use of the Community room is needed during peak visitation periods while the expanded lobby area is being constructed, visitors would need to be directed around the west side of the building in order to avoid inherently unsafe construction materials and equipment on the northeast side that would be under construction. Such arrangements - involving primarily signing - would be performed in- house by the Interpretation and Maintenance divisions.

The existing exhibits would be removed and museum objects currently displayed in the visitor center would be temporarily relocated to the curatorial facility where they would be protected from adverse environmental conditions. Once an exhibit plan for new exhibit is prepared, some of these objects would be again placed on display. Many of the paleontological specimens are replicas of the original fossils and would need minimal climatic control for their preservation until such time that the park has the facility for their eventual redisplay. The park is currently considering the possibility of providing visitors with an exhibit that would focus upon paleontological resources and it is possible that some of the replicas of fossil specimens could be used in an exhibit of that nature. Thus the removal of those specimens from the visitor center would not be permanently withdrawn from public appreciation. The original artifacts currently on display would be temporarily relocated indefinitely to the curatorial facility.

Sidewalk, sewer, roof drainage, electrical and phone rerouting would be necessary. The Founders Walk is a non- historic interpretive feature added in recent decades and it would be replaced by a small unobtrusive plaza or courtyard at the northeast corner of the visitor center. Its design would incorporate Mission 66 architectural principles, but would be visually identifiable as a non- historic construction.

Revegetation would be addressed in house via an already approved Fee Demonstration project for revegetation along the northeast side of the Visitor Center. Such work may involve contractor(s) as well.

Mitigation Measures of the Preferred Alternative:

To minimize construction related impacts upon visitors, construction would occur during Big Bend National Park's off- season, when visitation is lower. However, the construction would undoubtedly overlap with some holiday periods when visitation is increased. During those

periods it is customary to temporarily move visitor center operations to the community room—such as backcountry permit operations. Accommodating this during construction would require that visitors walk around the west side of the building to the community room. The impact would be adverse, of short duration, and moderate in intensity.

The park has conceptualized reestablishing the Founders Walk in approximately the same location. The general concept regarding this action currently envisions a small patio/plaza that would be incorporated into the walkway that would encircle the new expansion, in the area outside the northeast corner windows. Such an interpretive exhibit would require new porcelain enamel wayside panels (2- 3), mounted on standard low- profile bases, to replace the existing deteriorated exhibit panels. The concrete work would resemble the Mission 66 sidewalk in pattern and color.

An equipment staging and stockpile area would be established at K- Bar Contractor's Camp, and also at a designated disturbed area in the maintenance area of Panther Junction. Total duration of use of these areas is expected to be no more than six (6) months. Disturbance at each site would be limited to placing and removing piles of imported gravel, palletized concrete block and like items, as well as tire tracks, foot traffic, and the placement of several travel trailers for the duration of the project.

The existing wastewater and roof drain lines would be cut at the edge of the project clearing limits, capped for a while, and then connected to the reconstructed building's new wastewater and roof drainage lines. The existing water line which serves the exterior toilet would be located where it connects to the existing water main, and capped at that location—an area disturbed in the 1990s when the exterior toilet was installed.

Noise associated with the demolition and construction work would be limited to normal working hours. Such noise would occasionally be loud—such as when concrete block is being cut with a power saw. Normally, the noise level would be no greater than that of an idling diesel powered pickup truck.

Clearing limits for building demolition (including finding, cutting, capping and later reconnection to existing utilities—as applicable), construction and access to the building site, as well as a staging and stockpiling zone, would be identified and fenced with construction tape or some similar material prior to any construction activity. The fencing would define the zone and confine activity to the minimum area required for construction activities. All protection measures would be clearly stated in the construction specifications and workers would be instructed to avoid conducting activities beyond the zone as defined by the fencing. In addition, the National Park Service would ensure that all contractors and subcontractors are informed that damage to resources outside the scope of work is subject to prosecution, fine, restitution costs, and other penalties.

Soil cast aside during trenching would be susceptible to some erosion but standard erosion control measures, such as silt fences, sand bags, or straw bales would be used, as necessary, to minimize any potential soil erosion. To avoid introduction of exotic plant species, no hay bales would be used to control soil erosion. Hay usually contains grain that is considered to be undesirable or exotic plant species. Therefore, on a case- by- case basis the following materials

may be used for any erosion control dams that may be necessary: hydromulch, rice straw, and wood and cellulose excelsior bales.

Excavated soil would be used for backfill around and beneath the building addition. No local borrow material would be used. Imported borrow and/or aggregate base material would be sterile, as well as certified archeologically sterile and weed free. Any excess material generated from trenching would be stockpiled in park storage areas for future use in approved projects or disposed of at approved sites outside the park.

The presence of significant archeological materials at the project location is highly unlikely. If during construction previously undiscovered archeological resources are discovered, all work in the immediate vicinity of the discovery would be halted until the resources could be identified and documented and an appropriate mitigation strategy developed, if necessary, in consultation with the Texas State Historic Preservation Office. In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (25 USC 3001) of 1990 would be followed.

Fueling of all construction vehicles and street- legal equipment would occur outside of Big Bend National Park or at concessions- operated facilities within the park.

The National Park Service adopted the concept of sustainable design as a guiding principle of facility planning and development. The objectives of sustainability are to design National Park Service facilities to:

- minimize adverse effects on natural and cultural values,
- reflect their environmental setting,
- maintain and encourage biodiversity,
- construct and retrofit facilities using energy- efficient materials and building techniques,
- operate and maintain facilities to promote their sustainability, and
- to illustrate and promote conservation principles and practices through the sustainable design and ecologically sensitive use.

Essentially, sustainability is living within the environment with the least impact on the environment within the existing economic paradigm. The proposed action subscribes to and supports the practice of sustainable planning, design, and use of the visitor center.

Table 1: Comparative Summary of Alternatives and Extent to Which Each Alternative Meets the Project Objectives

Alternative A – No Action	Alternative B – Preferred Alternative
The interior of the visitor center would not be remodeled. Crowded, noisy conditions in the visitor center lobby would continue. Space for BBNHA sales would continue to be limited. Staff members at the lobby's information desk would continue to work in an intrusive and noisy atmosphere. Exhibits would continue to inadequately inform the visitors of park resources and self-discovery educational opportunities. A single HVAC system would continue serving both the lobby and the administrative offices on the northwest side of the building. **Meets Project Objectives?** No. Continuing the existing conditions would neither improve visitor flow in the lobby nor maximize the use of space to better provide more in- depth park orientation and published information about the park's primary interpretive themes. Environmental conditions for employees and visitors would not be served well by improved HVAC.	Visitor center lobby would be reconfigured and information desk enlarged and made fully accessible. Visitor contact would be able to expand into the present sales area. Sales items could be displayed in a less crowded area and would not block the view of NPS interpretive panels. Windows would again be open to allow exterior light to enter the lobby. The existing restroom would be made handicap accessible and this would remove a redundant building from the view of the Mission 66 visitor center. Two HVAC systems would separate air conditioning into two different functional areas having different environmental control requirements. **Meets Project Objectives?** Yes. Expanding the visitor center would more efficiently serve the needs of visitors and staff by improving visitor flow, maximizing the use of space to better provide more in- depth orientation and information about the park's primary interpretive themes, providing adequate office and work space for the park's interpretive staff, and improved HVAC. Architectural design of the addition would be compatible with Mission 66 design. Removal of the accessible restroom outbuilding would remove a non-historic structure that was not part of the original landscape setting. The original restrooms would once again serve all park visitors equally.

Table 2: Comparative Summary of Environmental Impacts- No Action and Preferred Alternatives

Impact Topic	Alternative A –No Action	Alternative B –Preferred Alternative
Historic Structures/ Buildings	No change to existing conditions and no construction related impacts. Impacts would be adverse and long- term, but minor in intensity.	A 25' section of original Mission 66 wall would be removed on the exterior of the building and 1,110 square feet of new floor space would be added. New exterior wall material would be similar in color, texture, and pattern to the existing. Two interior frame and gypsum board walls would be removed. The existing acoustical tile- on- gypsum board ceiling in the existing visitor center lobby would be removed and replaced with a conventional suspended grid- type ceiling. Wall and floor surfaces would remain as is: gypsum board walls and carpet tile flooring- over original asbestos linoleum. New recessed- in- grid fluorescent lighting and track lighting would be installed in the new and reconstructed visitor center lobby spaces. Impacts are considered to be local, long- term, minor and beneficial in intensity.
Museum Collections	No change to existing conditions. Museum items would continue to occupy their current space. Impacts would be beneficial and long- term, and negligible in intensity.	Museum objects would be placed in long term climate controlled conditions thus insuring their preservation until such time that they can be redisplayed for public appreciation. Impacts would be beneficial and long- term, and negligible in intensity.
Visitor Use/ Experience	Crowded, noisy conditions in visitor center lobby during periods of high visitation would not be alleviated. Visitor flow through visitor center would not be improved. Information desk would not be enlarged. Crowded conditions in lobby of visitor center during high visitation would continue to hinder park staff in efforts to cordially greet visitors and collect fees. More space would not be provided in the	Visitor flow through visitor center would be improved, more room for visitors to be served between the two cash registers on enlarged information desk would be provided, use of lobby space maximized to better present park's primary interpretive themes. Uncrowded conditions in lobby would permit park staff to more cordially greet visitors and collect fees. Visitors would have more

	lobby for visitors to browse exhibits, interpretive materials, and BBNHA educational books on display. Impacts to visitor use and experience would be adverse, moderate in intensity, and long- term.	space to browse exhibits, interpretive materials, and BBNHA educational books on display without feeling rushed. Impacts would be beneficial, long- term, and moderate in intensity.
Park Operations	During high visitation, visitor center lobby would continue to be crowded and noisy, hindering service that park staff can provide. Space for BBNHA materials would continue to be limited. Staff members at the lobby's information desk would continue to work in intrusive and noisy atmosphere. Employees would experience unpleasant work environment due to inadequate HVAC. Impacts to park operations would be adverse, moderate in intensity, and long- term.	Uncrowded conditions in visitor center lobby during high visitation would enhance staff contact with visitors. Larger, uncrowded area for BBNHA would provide space for more interpretive materials. Wall between information desk and nearby workstations would reduce amount of intrusive noise on staff working at desks. Improved HVAC that is separately controlled according to the needs of different functional areas would improve work conditions for employees. Impacts would be beneficial and long- term, and moderate in intensity.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

The environmentally preferred alternative is determined by applying the criteria suggested in the National Environmental Policy Act of 1969 (NEPA), which is guided by the Council on Environmental Quality (CEQ). The CEQ provides direction that "[t]he environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA's Section 101...:"

- fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- assure for all generations safe, healthful, productive, and esthetically and culturally pleasing surroundings;
- attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
- preserve important historic, cultural and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice;
- achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities; and
- enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Alternative A is not the environmentally preferred alternative because it fails to provide for changes that have occurred since the visitor center was originally built such as adequate room for increased visitation, adequate space to accommodate the increase in published educational materials, and changes in the use of interior spaces of a historic building.

The continued use of an inadequate facility having crowded conditions, inadequate environmental controls for the different functional areas of the building; does not provide "…healthful, productive, and esthetically and culturally pleasing surroundings…" for visitors or provide productive working conditions for employees.

Alternative B, the preferred alternative, is the environmentally preferred alternative. Because implementing the preferred alternative would provide increased sales area for Big Bend Natural History Association; improve visitor flow in the visitor center; maximize the use of space in the visitor center to better orient the park's visitors to the challenges they may encounter in the varied environmental zones of the park; and provide adequate office work space and environmental conditions for the park's staff, Alternative B more fully promotes "…safe, healthful, productive, and esthetically and culturally pleasing surroundings… ."

Through sensitive redesign of the expansion of a historic structure, Alternative B also integrates resource protection with opportunities for an appropriate range of visitor uses, which "preserve(s) important historic, cultural and natural aspects of our national heritage…" while providing "…an environment that supports diversity and variety of individual choice."

ALTERNATIVES CONSIDERED BUT REJECTED

Several alternatives were proposed in order to solve the crowding situation in the existing lobby. None of these alternatives addressed reusing the existing original public toilets. The alternatives are briefly described below.

I. Enclose the original porch/ramada at the front of the existing original toilet and lobby front door area. Construct a replica of the original front façade as an enclosure that would become an expanded lobby.

II. Construct new office space by creating an office addition in the area of the public utilities connections at the southwest corner of the existing building. By creating additional office space, existing interior offices could be vacated just south of the existing lobby, and after suitable demolition of interior partition walls, this space could be incorporated into a combined larger lobby. This alternative would require a complete relocation of a large bank of HVAC equipment, the large backup power generator, and underground utilities that currently occupy that area.

III. Add office space by creating an office addition on the northeast side of the visitor center, in the area just northeast of the Community Room. By creating additional office space, existing interior offices could be vacated just south of the existing lobby, and after suitable demolition of interior partition walls, this space could be incorporated into a combined larger lobby.

IV. Add office space by creating an office addition in the existing courtyard. By creating additional office space, existing interior offices could be vacated just south of the existing lobby, and after suitable demolition of interior partition walls, this space could be incorporated into a combined larger lobby. Part of the character defining architectural design of this Mission 66 building is the large central courtyard.

Each of these alternatives was rejected on the basis that they posed excessive impact to the historic fabric or character defining architectural design of the Mission 66 building. Specifically, item I) was rejected on the basis of serious disruption to the primary edifice of the building and constitute major alterations of the building. Items II & III) were rejected primarily due to the impact on the modifications would have on the flow and feel of the interior of the building. Item IV) was rejected for the same interior modification reasons as items II & III), as well as the loss of the signature courtyard, which is deemed an important component of the existing design.

The proposed alternative would modify the exterior of the building in a way that is sympathetic to the Mission 66 design principles. The addition would be peripheral to the main edifice, would be recognizable as a non- period addition, and would be theoretically removable. Additionally, the proposed alternative would eliminate the non- period handicap accessible toilet outbuilding, and renovates the existing original toilets so that they resume their position as the primary toilet facility serving park visitors. This action would also bring the visitor center up to current ADA handicap accessibility standards.

ENVIRONMENTAL CONSEQUENCE

METHODOLOGY FOR ASSESSING IMPACTS

Potential impacts are described in terms of type (are the effects beneficial or adverse?), context (are the effects site- specific, local, or even regional?), duration (are the effects short- term, lasting less than one year, or long- term, lasting more than one year?), and intensity (are the effects negligible, minor, moderate, or major). Because definitions of intensity (negligible, minor, moderate, or major) vary by impact topic, intensity definitions are provided separately for each impact topic analyzed in this environmental assessment/assessment of effect. All impacts discussed in this environmental assessment/assessment of effect are site- specific in context.

In addition, National Park Service's *Management Policies, 2001* (2000) require analysis of potential effects to determine whether or not actions would impair park resources. The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. National Park Service managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adversely impacting park resources and values. However, the laws do give the National Park Service the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the National Park Service the management discretion to allow certain impacts within park, that discretion is limited by the statutory requirement that the National Park Service must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible National Park Service manager, would harm the integrity of park resources or values. An impact to any park resource or value may constitute impairment, but an impact would be more likely to constitute impairment to the extent that it has a major or severe adverse effect upon a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- key to the natural or cultural integrity of the park; or
- identified as a goal in the park's general management plan or other relevant NPS planning documents.

Impairment may result from National Park Service activities in managing the park, visitor activities, or activities undertaken by concessioners, contractors, and others operating in the park. A determination on impairment is made in the *Environmental Consequences* section for soils, historic structures, museum collections, and park operations.

Cumulative Impacts: The Council on Environmental Quality (CEQ) regulations, which implement the National Environmental Policy Act of 1969 (42 USC 4321 *et seq*.), require assessment of cumulative impacts in the decision- making process for federal projects. Cumulative impacts are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable

future actions regardless of what agency (federal or non- federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative impacts are considered for both the no- action and preferred alternatives.

Cumulative impacts were determined by combining the impacts of the preferred alternative – expanding the visitor center and modifying the rest rooms - with other past, present, and reasonably foreseeable future actions. Therefore, it was necessary to identify other ongoing or reasonably foreseeable future projects at Big Bend National Park and, if applicable, the surrounding region. Two reasonably foreseeable future projects are envisioned at Panther Junction developed area. One is construction of a new visitor center as identified in the 2004 General Management Plan. This project is not planned for the near future and is subject to the availability of NPS Line- Item Construction funding. It would no doubt take several years to successfully compete for funding through that process. The exact architectural style and physical siting of the building is undetermined, but consideration would be given to aesthetic compatibility with existing buildings within the Panther Junction developed area.

The second project that is currently planned and which has been funded is construction of a new facility to house the Science and Resource Management operation. This new facility includes improved curatorial storage having significantly increased storage space and improved climate control and monitoring. This facility will not be sited near the visitor center and poses no cumulative impact to the historical setting of the visitor center. This facility will not be a public facility and will not affect visitor use. Because the Science and Resource Management division is currently house in a separate facility, relocation to a new facility will not affect park operations in the visitor center.

A third reasonably foreseeable project is the possible creation of a new paleontological exhibit at some future date that would provide a location where some of the replicas of fossil specimens could be used in an exhibit of that nature. Thus the removal of those specimens from the visitor center would not be permanently withdrawn from public appreciation. The location of that facility is envisioned to be not at Panther Junction and would not cumulatively affect the Panther Junction developed area. If this project is approved, funded, and implemented, it would only affect the paleontological replicas currently on display in the visitor center.

Impacts to Cultural Resources and §106 of the National Historic Preservation Act: In this environmental assessment/assessment of effect, impacts to historic structures are described in terms of type, context, duration, and intensity, as described above, which is consistent with the regulations of the Council on Environmental Quality (CEQ) that implement the National Environmental Policy Act (NEPA). These impact analyses are intended, however, to comply with the requirements of both NEPA and §106 of the National Historic Preservation Act (NHPA). In accordance with the Advisory Council on Historic Preservation's regulations implementing §106 of the NHPA (36 CFR Part 800, *Protection of Historic Properties*), impacts to archeological resources and the cultural landscape were identified and evaluated by (1) determining the area of potential effects; (2) identifying cultural resources present in the area of potential effects that were either listed in or eligible to be listed in the National Register of Historic Places; (3) applying the criteria of adverse effect to affected cultural resources either listed in or eligible to be listed in the National Register; and (4) considering ways to avoid, minimize or mitigate adverse effects.

Under the Advisory Council's regulations a determination of either *adverse effect* or *no adverse effect* must also be made for affected, National Register eligible cultural resources. An *adverse effect* occurs whenever an impact alters, directly or indirectly, any characteristic of a cultural resource that qualify it for inclusion in the National Register, e.g. diminishing the integrity of the resource's location, design, setting, materials, workmanship, feeling, or association. Adverse effects also include reasonably foreseeable effects caused by the preferred alternative that would occur later in time, be farther removed in distance or be cumulative (36 CFR Part 800.5, *Assessment of Adverse Effects*). A determination of *no adverse effect* means there is an effect, but the effect would not diminish in any way the characteristics of the cultural resource that qualify it for inclusion in the National Register.

CEQ regulations and the National Park Service's *Conservation Planning, Environmental Impact Analysis and Decision- making* (Director's Order #12) also call for a discussion of the appropriateness of mitigation, as well as an analysis of how effective the mitigation would be in reducing the intensity of a potential impact, e.g. reducing the intensity of an impact from major to moderate or minor. Any resultant reduction in intensity of impact due to mitigation, however, is an estimate of the effectiveness of mitigation under NEPA only. It does not suggest that the level of effect as defined by §106 is similarly reduced. Although adverse effects under §106 may be mitigated, the effect remains adverse.

A §106 summary is included in the impact analysis sections for historic building resources under the preferred alternative. The §106 Summary is intended to meet the requirements of §106 and is an assessment of the effect of the undertaking (implementation of the alternative) on cultural resources, based upon the criterion of effect and criteria of adverse effect found in the Advisory Council's regulations.

HISTORIC STRUCTURES/BUILDINGS

Definitions Of Intensity Levels

The visitor center was constructed in 1962 as part of the Mission 66 development of the park, to serve as the main park administration building and visitor contact center. The Mission 66 program was a large- scale development program initiated by the Park Service to improve park infrastructure and interpretation opportunities for the ever increasing number of visitors. The program was initiated in 1956 with the goal of completing the improvements in time for the National Park Service anniversary in 1966. As part of the Mission 66 program, a flurry of construction took place in developed areas at Panther Junction, Rio Grande Village, and the Chisos Basin.

Mission 66 represents the largest initiative in National Park Service history for park improvements and expansion. Director Conrad Wirth proposed the ten year project to revitalize the parks for the fiftieth anniversary of the park service, 1966. Mission 66 plans included a change in traditional park design in order to accommodate and educate the increased numbers of park visitors following WWII. A new building type, the visitor center, became common, as did increased interpretation opportunities, campsites, trails, picnic grounds, auditoriums,

restrooms, and accommodations for private automobiles. Modern forms and materials were used in Mission 66 construction, also called "Park Service Modern" architecture, marking a distinctive break from the natural materials previously used in the "Park Service Rustic" style. Materials such as textured concrete with panels of stone veneer, painted steel columns, and lat roofs with projecting flat terraces were common. Education and comfort of the visitor were the main priority. (Allaback 2000)

The National Park Service recognizes that while not yet 50 years old, as generally required under National Register standards, Mission 66 development may have historical significance. A contextual study for evaluating the historical significance of Mission 66 cultural landscapes is in progress. Until this study is completed, a formal determination of the eligibility of the Mission 66 resources of Big Bend National Park can not be determined. A more formal site specific determination will need to be prepared in conjunction with the Park Service Wide Mission 66 report in the future. However, §106 of the NHPA requires the preservation of such buildings as though they were eligible until such time as they can be evaluated, and nominated to the National Register of Historic Places.

In order for a structure or building to be listed in the National Register, it must be associated with an important historic context *and* possess historic integrity of those features necessary to convey its significance, i.e. location, design, setting, workmanship, materials, feeling, and association. For purposes of analyzing potential impacts to the visitor center, the thresholds of change for the intensity of an impact are defined as follows:

Negligible: Impact is at the lowest levels of detection with neither adverse nor beneficial consequences. The determination of effect for §106 would be *no adverse effect*.

Minor: **Adverse:** alteration of a feature(s) would not diminish the overall integrity of the resource. The determination of effect for §106 would be *no adverse effect*.
Beneficial: stabilization/ preservation of features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. The determination of effect for §106 would be *no adverse effect*.

Moderate: **Adverse:** alteration of a feature(s) would diminish the overall integrity of the resource. The determination of effect for §106 would be *adverse effect*. A memorandum of agreement (MOA) is executed among the National Park Service and applicable state or tribal historic preservation officer and, if necessary, the Advisory Council on Historic Preservation in accordance with 36 CFR 800.6(b). Measures identified in the MOA to minimize or mitigate adverse impacts reduce the intensity of impact under NEPA from major to moderate.
Beneficial: rehabilitation of a structure in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. The determination of effect for §106 would be *no adverse effect*.

Major: **Adverse:** alteration of a feature(s) would diminish the overall integrity of the resource. The determination of effect for §106 would be *adverse effect*. Measures to minimize or mitigate adverse impacts cannot be agreed upon and the National Park Service and applicable state or tribal historic preservation officer and/or Advisory Council are unable to negotiate and execute a memorandum of agreement in accordance with 36 CFR 800.6(b). **Beneficial**: restoration of a structure in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. The determination of effect for §106 would be *no adverse effect*.

Impairment: A major, adverse impact to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of (park name); (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning documents.

Effects of Alternative A (No- Action Alternative)

The No Action Alternative would result in local, long- term, negligible impact to the historic Mission 66 architecture because there would be no change in appearance, workmanship, or integrity. Although the exterior appearance would remain unchanged the non- historic exterior handicapped accessible restroom would continue to occupy its position in the view on the east side of the visitor center. The aging ceiling in the visitor center could collapse as it has done in several offices. The interior lighting of the visitor center would remain dependent upon artificial light because sales display racks would continue to block windows on the front of the building and prevent the entrance of natural light. The landscaping outside the visitor center would remain in its current state and the natural decline of individual plants would continue to require replacement as needed.

Cumulative Impacts: In the future, a new visitor center would resolve the problems related to adequate space, but its placement in close proximity to the existing visitor center might result in a long- term, minor adverse impact to the historic setting of the Mission 66 visitor center.

Conclusion: Since there would be no change to existing conditions and no construction related impacts, indirect impacts would be local, long- term, negligible, but minor in intensity

Effects of Alternative B (Preferred Alternative)

The overall design concept was generated through a discussion of alternatives involving park staff with the current head of the NPS Mission 66 review panel who is a historical architect qualified to determine appropriate treatment following NPS policy and Secretary of Interior Standards for Historic Preservation. The head of the review panel continues to offer assistance regarding material choices and smaller aspects of the design. Preliminary design drawings (included in this document) were prepared specifically for this environmental

assessment/assessment of effect to illustrated the concepts described herein (Sheet A1, Administration Building Existing Floor Plan—Demolition; Sheet A2, Administration Building Addition/Renovation; Sheet A4, Administration Building Exterior Elevations). Because these modifications take into consideration the cumulative effects upon this National Register eligible building, and because mitigative measures include avoidance of historically and architecturally incompatible design and materials, the impacts are considered to be adverse but minor in intensity, long term in duration, and local in context.

The expansion of the lobby area would remove about 25 feet of original exterior wall from the northeast side of the building and add an additional 1,110 feet of floor space. A 2- inch building expansion joint would provide for differential expansion between the original wall and the addition. A low screening wall on the northeast side would also be removed. The addition would include a new storage area larger than that removed in the above treatment. The addition would also include a new mechanical room to accommodate the two HVAC units for the lobby and the front suite of offices.

At the front entrance, the existing aluminum/glass front would remain with the exception that an automated fee payment machine would be installed near the front entrance of the lobby by setting it into the location of the existing glazing immediately right of the lobby entrance doors, for public fee payments during and after hours. The glazing in that window would be removed and turned over to the NPS and would be replaced with metal sheeting to surround the fee payment machine, that would be painted to match the existing metal trim.

The non- historic handicap accessible restroom would be removed. The existing sewer line would remain in service. A section of the existing sidewalk occupying the area for the expansion would be removed. The Founders Walk is a non- historic interpretive feature added in recent decades and it would be replaced by a small unobtrusive plaza or courtyard at the northeast corner of the visitor center. These anodized aluminum interpretive signs and their rock bases have deteriorated from years of use and would need to be replaced if this interpretive feature was to be continued. Construction of a small patio in its place would incorporate Mission 66 architectural principles, but would be visually identifiable as a non- historic construction. The redesign of these non- historic features and structures is considered a long- term, minor and beneficial impact.

The roof line would conform to the existing roofline, but would be lower in elevation and subordinate to the original roofline. The existing metal roof fascia would remain and would be protected during construction. Metal roof fascia on the addition would match the existing in size and design. Windows would reflect the general proportions of the original window pattern and window frames would have satin aluminum finish to match the existing. The exposed concrete foundation, roof fascia and other trim would be painted to match the existing.

The interior modifications of the lobby include removal of the existing exhibits from the northwest and northeast walls. The employee office behind the front desk would remain and the door would be relocated to an adjacent wall to facilitate employee access. The walls dividing the existing storage room and the existing mechanical room from the lobby would be removed to convert their square footage into lobby space.

The original 12- inch acoustic tile and gypsum board ceiling throughout the administration building has deteriorated and several sections of ceiling have collapsed and have been replaced with suspended ceiling. Fortunately, these ceiling collapses have all occurred after work hours and no employee injuries occurred as a result of the collapses. The concern for public safety in the lobby area requires that the ceiling in the lobby be removed and be replaced with suspended ceiling. The suspended ceiling would permit easy installation of fire suppression piping and emitters, electrical conduit, and HVAC duct to upgrade the area to current standards.

The original floor was concrete and vinyl linoleum tile that was covered with tile carpeting during the previous decade. The tile carpeting has a life- scale replica outline of the Quezalcoatalus dinosaur fossil (the largest flying reptile discovered in the park) inlaid into the carpet. This pattern would be replicated in the new expansion.

The existing interior lighting and electrical system would be removed and replaced with new electrical wiring and lighting that meets current electrical code. The existing non- historic carpeting has become worn from use and would be replaced with new tile carpeting.

The existing restrooms would be modified to meet current ADA handicap accessible standards. This would require removing the interior non- compliant partitioning to allow space for partitioning meeting ADA standards. Low flush fixtures would replace the existing fixtures throughout. New plumbing would be routed to accommodate the new ADA compliant floor plan. Modification of the restrooms would require relocating the existing U.S. Postal Service stamp machine near the men's room, which would be installed just beyond the existing front porch/ramada slab, in a masonry veneered housing.

Mitigative measures:

Exterior modifications would be designed for compatibility with sensitivity to Mission 66 design principles by replicating the color, texture, and patterning of the original external surface. The removal of the existing handicap accessible restroom would remove a non- historic addition from the scene that currently detracts from the historic character of the setting. Interior treatments would likewise conform as closely as practical to the feel, sense of space, and the ambience of natural illumination through the exterior windows. By creating a new sales area, the sales racks that currently cover one set of windows would be relocated, allowing natural light to once again enter the lobby area through those windows.

Materials would be chosen to closely match the existing period fabric. Colors, textures, and patterns would be selected for compatibility with Mission 66 design principles.

Through the treatments described, the preferred alternative would allow the visitor center to once again adequately accommodate the increased park visitation and provide adequate interpretation of the park to enhance the visitor experience.

The single HVAC system that currently serves the entire suite of offices along the front of the administration building would be replaced by two separate HVAC systems that would serve the two different functional areas (visitor center lobby versus administration offices). This would enhance the work environment for park staff and would improve the interior climate for park

visitors by having mechanical systems adequate for such crowed spaces. Energy consumption would be reduced through use of more efficient HVAC equipment, and the ability to "set back" the thermostat in the non- occupied public space at night.

Interim handling of visitor services would be required when the existing lobby and toilets are undergoing reconstruction. The scheduling and specifics of such handling have yet to be worked out in detail. Current thinking is that the existing original restrooms would be reconstructed and completed prior to the demolition of the existing handicap accessible toilet/construction of the expanded lobby area. In this manner there would be fewer total days of visitor disruption.

Currently, during periods of peak visitation, the Community Room has been used to relieve the demand for camping permit issuance and dissemination of backcountry use information. If use of the Community room is needed during peak visitation periods while the expanded lobby area is being constructed, visitors would need to be directed around the west side of the building in order to avoid inherently unsafe construction materials and equipment on the northeast side that would be under construction. Such arrangements would be performed in- house by the Interpretation and Maintenance divisions.

The existing exhibits would be removed and museum objects currently displayed in the visitor center would be relocated to the curatorial facility where they would be protected from adverse environmental conditions. Once an exhibit plan for new exhibit is prepared, some of these objects might be again placed on display. Many of the paleontological specimens are replicas of the original fossils and would need minimal climatic control for their preservation until such time that the park has the facility for their eventual redisplay. The park is currently considering the possibility of providing visitors with an exhibit that would focus upon paleontological resources and it is possible that some of the replicas of fossil specimens could be used in an exhibit of that nature. Thus the removal of those specimens from the visitor center would not be permanently withdrawn from public appreciation. The original artifacts currently on display would be relocated indefinitely to the curatorial facility.

Revegetation would be addressed in house via an already approved Fee Demonstration project for revegetation along the northeast side of the Visitor Center. Photographs from the first decades of use of the visitor center would be used to guide the selection of plantings to replicate as closely as possible the original plantings that surrounded the edifice.

Cumulative Impacts: As is true with any preservation treatment on historic buildings, the incremental replacement of original fabric with non- historic materials progressively alters the building into a "replication." Replacement of materials "in- kind" is an acceptable treatment according to the Secretary of Interior Standards for Historic Preservation. Care must be taken to avoid complete replacement of original historic fabric. Likewise, non- historic additions to buildings should be made compatible with original historic materials, design, and workmanship. Care should be taken to not alter the character defining features of the building. The use and modification of the interior spaces of the Panther Junction visitor center over its life span has changed with the changing needs of park administration. This is apparent when one looks over the original floor plan layout that identifies specific functions associated with specific offices. Since 1962, park duties and staff have increased substantially and some functions have been

relocated to other facilities in the park. Some functions were relocated to offices more closely matching the needs of the specific functions. It must be understood that any building that is in use is not static and that the dynamics of changing uses requires modifications to match the dynamics of functionality. The changes that have occurred to the visitor center have not appreciably altered the structure to the point of compromising its historic or architectural integrity.

Because the expansion of the visitor center takes into account the cumulative effects of use over time and modification of the facility to adapt to changing operational needs, and because the proposed work would be accomplished according to Secretary of Interior Standards for Historic Preservation, the cumulative effect is considered to be, an adverse minor impact that is local in context and long- term in duration.

The eventual construction of a new visitor center as identified in the 2004 General Management Plan would alleviate the crowding that exists in the existing facility. Because the siting of the new visitor center would take into account the historic setting of the Mission 66 building and should not detract from the overall Mission 66 landscape, this project would not cumulatively affect historic building resources when considered with other past, present, and reasonably foreseeable future actions.

Conclusion: Because the modifications described herein would be performed according to the Secretary of Interior Standards for Historic Preservation, the expansion would not adversely affect the character defining features of a National Register of Historic Places eligible or listed structure or building. Because alteration of a building would not diminish the overall integrity of the resource, the determination of effect for §106 would be *no adverse effect*. Considering these effects to be local, long term, minor and beneficial, in intensity, this alternative would not impair historic buildings.

§106 Summary: After applying the Advisory Council on Historic Preservation's criteria of adverse effects (36 CFR Part 800.5, *Assessment of Adverse Effects*), the National Park Service concludes that implementation of the preferred alternative would have *no adverse effect* on the National Register of Historic Places eligible Panther Junction Visitor Center.

MUSEUM COLLECTIONS

Definitions Of Intensity Levels

Museum collections may be threatened by fire, theft, vandalism, natural disasters, and careless acts. The preservation of museum collections is an ongoing process of preventative conservation, supplemented by conservation treatment when necessary. The primary goal is preservation of artifacts in as stable condition as possible to prevent damage and minimize deterioration. For purposes of analyzing potential impacts, the thresholds of change for the intensity of an impact are defined as follows:

Negligible: the impact is at the lowest levels of detection - barely perceptible and not measurable.

Minor: the impact is measurable and perceptible, but affects only a few artifacts in the museum collection.

Moderate: the impact is measurable and perceptible and affects many artifacts in the museum collection.

Major: the impact is measurable and perceptible and affects a substantial number of artifacts in the museum collection.

Impairment: a major, adverse impact to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Big Bend National Park; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning documents.

Effects of Alternative A (No- Action Alternative)

The existing exhibits would not be removed at this time. Most of the 83 museum objects currently on display are non- perishable items for which the park routinely monitors temperature and humidity. Because this small number of artifacts receives constant care, retaining these objects in their current display would not be adverse, and would be a long- term impact of negligible intensity.

Cumulative Impacts: The vast majority of the over 125,000 museum objects in the park's museum collection are properly accessioned, cataloged, and stored, either at the park or various universities and other NPS approved repositories located throughout the state of Texas and the U.S. Over the decades, a lack of adequate curatorial storage space with appropriate environmental controls contributed to a minor level of deterioration and decay of museum collections at the park. However, this has been mitigated in recent years by installation of a climate controlled storage facility and careful environmental monitoring. The park will be constructing a new curatorial storage facility having improved security and environmental controls to further mitigate adverse impacts to museum collections. The impacts associated with the No Action Alternative contribute in a small way to this cumulative impact; however, the displayed objects constitute a small percentage of the total collection (less than one thousandth of one percent) and cumulative impacts from the No Action Alternative would be negligible and long- term when considered with other past, present, and reasonably foreseeable future actions.

Conclusion: There would be a beneficial, long- term impact of negligible intensity to the perishable artifacts on display. The cumulative impacts would be negligible and beneficial. Because there would be no major, adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Big Bend National Park; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning documents, there would be no impairment of the park's museum collections or values.

Effects of Alternative B (Preferred Alternative)

The exhibits with the 83 museum objects would be removed and the objects would be temporarily returned to environmentally controlled storage for safekeeping. Once an exhibit plan for new exhibits is prepared, some of these objects would be again placed on display. The impact would be beneficial, long- term, and minor in intensity.

Cumulative Impacts: The vast majority of the over 125,000 items in the park's museum collection are properly accessioned, cataloged, and stored, in the park's museum collection storage building at Panther Junction. Over the decades, lack of adequate curatorial space with appropriate environmental controls has contributed to the deterioration and decay of museum collections at the park. Such adverse impacts were long- term and ranged in intensity from minor to moderate. The park will be constructing a new curatorial storage facility having improved security and environmental controls to further mitigate adverse impacts to museum collections. Because storage conditions are improved and the condition of museum objects would continue to be monitored, the cumulative impacts associated with implementation of the preferred alternative would be negligible, beneficial, and long- term.

Conclusion: There would be a beneficial, long- term impact of negligible intensity to the perishable artifacts removed from display. Cumulative impacts resulting from the preferred alternative would be negligible and beneficial. Because there would be no major, adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Big Bend National Park; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning documents, there would be no impairment of the park's museum collection resources or values.

VISITOR USE AND EXPERIENCE

Definitions of Intensity Levels

Staff observation of visitation patterns and the ability of the visitor to effectively experience and understand resources mentioned in the park's establishing legislation were the basis for determining potential impacts of each alternative. For purposes of analyzing potential impacts, the thresholds of change for the intensity of an impact are defined as follows:

Negligible:	the impact is at the lowest levels of detection - barely perceptible and not measurable.
Minor:	the impact is slight but detectable, and would affect few visitors.
Moderate:	the impact is readily apparent, and would affect many visitors.
Major:	the impact is severely adverse or exceptionally beneficial, and would affect most visitors.

Effects of Alternative A (No- Action Alternative)

Under the No Action Alternative, impacts to visitor use and experience would be adverse, moderate in intensity, and long- term because there would be no remedy for the inconvenience caused by crowding, noise, and impeded traffic flow. During periods of high visitation, the park would continue to accommodate demand for backcountry camping and hiking permits by shifting the permit desk to the community meeting room. Even by shifting the permit issuance to another room, the crowding at the visitor center desk would still remain very difficult to manage. Crowded, noisy conditions in the visitor center lobby during periods of high visitation would continue. During high visitation, crowded conditions would impede visitor flow through the visitor center and hinder park staff in their efforts to cordially greet visitors and collect fees. The contact desk would continue to be inadequately sized and would not meet ADA handicap accessibility standards. The information desk would not be enlarged to provide more room for visitors to be served between the two cash registers. Lack of space in the lobby would continue to constrain the park's presentation of primary interpretive themes, as well as prevent visitors from comfortably browsing exhibits, interpretive materials, and educational books on display. The existing natural and cultural history exhibit panels would remain and would continue to lack substantive information. Sales exhibits would continue to block windows and NPS interpretive panels. The visitor experience would continue to suffer and would not be able to appreciate the subtle architectural qualities for which the lobby was originally designed. The Founders Walk would remain in its deteriorated state and visitors would continue experiencing the confusion by the lack of a terminus to the Founders Walk and would continue to wander around into the employees' parking lot at the back of the visitor center. The original restrooms would serve only the non- handicapped portion of park visitors.

Cumulative Impacts: Crowded, noisy conditions in the visitor center lobby during periods of high visitation would not be alleviated and visitor flow through the visitor center would not be improved. Because no reasonably foreseeable future construction is anticipated for the lobby or other areas of the visitor center, adverse impacts to visitor use and experience would continue and the cumulative impact would be adverse, moderate, and long- term.

Although no construction is associated with the No Action Alternative, reasonably foreseeable future construction actions, such as building an entirely new visitor center nearby would cumulatively impact visitor use and experience. When future construction occurs, construction vehicles could cause congestion along nearby roads and in the visitor center parking area. Such congestion would impact all visitors regardless of travel mode, because private vehicles and tour buses share the same roadways and parking areas, and would temporarily reduce the quality of experience for visitors. The impacts associated with each individual project would generally be short- term and minor, lasting only as long as construction. Cumulative impacts would be short-term, adverse, and range intensity from minor to moderate, depending upon whether or not any of the reasonably foreseeable actions are implemented simultaneously. However, the No Action Alternative would not be a component of such an overall cumulative impact.

Conclusion: Impacts to visitor use and experience would be adverse, moderate in intensity, and long- term.

Effects of Alternative B (Preferred Alternative)

Expanding the visitor center would result in a long- term, moderate beneficial impact upon visitor use and experience by improving visitor flow through the visitor center, providing more room for visitors to be served between the two cash registers on the enlarged information desk, and maximizing the use of space to better orient the visitors to the various environmental zones of the park. Uncrowded conditions in the lobby of the visitor center would permit park staff to more cordially greet visitors and collect fees. Visitors would also have more space to unhurriedly browse exhibits, interpretive materials, and educational books on display. In addition, sales exhibits would no longer block windows and NPS interpretive panels. Removing the sales exhibits from in front of the window would allow natural light to once again enter and illuminate the interior space, restoring that part of the historic ambience and making the interior more aesthetically pleasing for visitors.

Upgrading the HVAC system service and rewiring portions of the visitor center/museum's electrical system to meet current safety codes, and replacement of the aging acoustic ceiling in the lobby would enhance visitor safety. The impact would be long- term, beneficial, and moderate in intensity.

The existing exterior handicap accessible restroom would be removed and an architecturally compatible extension would be added to the administration building. Removal of this modern, visual intrusion from the setting would result in a minor, long term, beneficial impact upon visitor use and experience.

If construction occurred during a period of high visitor use and visitors would be required to obtain permits in the Community Room, they would have a longer walk around the west side of the administration building than is necessary now. This impact would be adverse, but minor and short- term, lasting only as long as construction and would affect primarily persons seeking backcountry camping permits.

While the restroom renovation and visitor center lobby area are under construction, visitor access may be temporarily restricted. Impacts would be adverse, but minor and short- term, lasting only as long as that portion of the construction. The visitor center lobby would remain open during much of the construction, but visitors touring the visitor center during construction could be inconvenienced and experience delays in service. For example, during demolition sections of the visitor center could be temporarily cordoned off with ceiling to wall plastic to control dust. All efforts would be made to reduce any inconveniences for visitors as much as possible, but some visitors inconvenienced by construction activities could be frustrated and may consider any inconveniences or delays interminable. However, construction is planned primarily during Big Bend National Park's off- season when visitation is lower. Overall such impacts would be adverse, but minor and short- term, and would not be expected to appreciably affect either the number of visitors to the park or their average length of stay.

Construction activities would also introduce temporary visual, audible, and atmospheric intrusions into the immediate area of the visitor center. Such intrusions could reduce the quality of the visitor experience during the construction period. Impacts would be adverse but construction related only, short- term, and minor.

Cumulative Impacts: If future construction of a new visitor center occurs, visitors would not be inconvenienced because construction would be completed before visitors would be shunted to the new facility. The impacts associated with this project would generally be short- term and minor, lasting only as long as construction. The short- term, minor, construction related, adverse impacts of the preferred alternative, in conjunction with adverse impacts of this reasonably foreseeable future action, could result in minor adverse cumulative impacts to visitor use; however, the adverse impacts of the preferred alternative would be a small component of any overall cumulative impact. In addition, any adverse cumulative impacts associated with implementation of the preferred alternative would be partially offset by the moderate beneficial impacts of the actions proposed.

Conclusion: Expanding the visitor center would result in a moderate, long- term, beneficial impact on visitor use and experience. Construction related impacts would be adverse but short-term and minor.

PARK OPERATIONS

Definitions Of Intensity Levels

The park staff's knowledge regarding operational efficiency, protection and preservation of important resources, and providing an effective visitor experience was used to determine the intensity levels of potential impacts. For purposes of analyzing potential impacts, the thresholds of change for the intensity of an impact are defined as follows:

Negligible: the impact is at the lowest levels of detection – barely perceptible and not measurable.

Minor: the impact is slight, but detectable.

Moderate: the impact is readily apparent.

Major: the impact is severely adverse or exceptionally beneficial.

Effects of Alternative A (No- Action Alternative)

Impacts to park operations would be adverse, moderate in intensity, and long- term. During high visitation, the visitor center lobby would continue to be crowded and noisy, hindering the service that park staff can offer visitors. Space for BBNHA materials, which assist park staff in providing interpretive materials relevant to the park, would continue to be limited. Staff members would continue to find it difficult to conduct their work at the contact desk in the intrusive and noisy atmosphere. Maintenance staff would continue to clean two restrooms instead of just a single set of handicap accessible restrooms. Increasing visitation would place an increasing burden on staff working in the visitor center. Health and wellbeing of employees in the administrative offices on the front of the building would suffer due to lack of adequate HVAC mechanical equipment. Employees in offices across the northwest side of the administrative

building would continue experiencing radical fluctuations in temperature as the visitor center becomes crowded and the capacity of the single HVAC system is taxed.

Cumulative Impacts: Reasonably foreseeable future actions at Big Bend National Park, such as construction of a new visitor center, could result in short- term, minor increases in the workloads of the park's staff, from planning and design reviews associated with that additional construction and the period of time when staff workstations are relocated into a new facility. Budgetary constraints make a new visitor center unlikely in the near future and the cumulative impact on park operations would be negligible for the duration of budgetary limitations.

Conclusion: Impacts to park operations would be adverse, moderate in intensity, and long- term.

Effects of Alternative B (Preferred Alternative)

The expansion of the visitor center would result in a long- term, moderate beneficial impact upon park operations by providing a larger contact desk that is handicap accessible and permitting park staff to more cordially greet visitors; providing additional space to reduce the crowding and confusion associated with periods of high visitation; increasing sales area for new educational materials; providing adequate environmental controls via an improved HVAC system; improve safety by providing electrical systems that are up to code and providing a more stable ceiling in the lobby; and reducing the number of restrooms to a single pair reduces the maintenance load.

Construction activities would also introduce temporary visual, audible, and atmospheric intrusions into the immediate area of the visitor center. Such intrusions could reduce the work atmosphere during the construction period. Impacts would be adverse but construction related only, short- term, and minor.

Cumulative Impacts: : Reasonably foreseeable future actions at Big Bend National Park, such as construction of a new visitor center, could result in short- term, minor increases in the workloads of the park's staff, from planning and design reviews associated with that additional construction and the period of time when staff workstations are relocated into a new facility. Budgetary constraints make a new visitor center unlikely in the near future and the cumulative impact on park operations would be negligible for the duration of budgetary limitations. However, any adverse cumulative impacts associated with reasonably foreseeable actions at the park would be partially offset by the moderate, beneficial impacts of the preferred alternative.

Conclusion: Implementation of the preferred alternative would result in a moderate, long- term, beneficial impact on park operations.

CONSULTATION AND COORDINATION

AGENCIES/ORGANIZATIONS

Agencies and Organizations contacted for information; or that assisted in identifying important issues, developing alternatives, or analyzing impacts; or that would review and comment upon the environmental assessment/assessment of effect include:

Federal Agencies

U.S. Fish and Wildlife Service

State Agencies

Texas Historical Commission, Austin, Texas

Associated American Indians

Apache Tribe of Oklahoma
Blackfeet
Comanche Tribe of Oklahoma
Kickapoo Traditional Tribe of Texas
Kiowa Tribe of Oklahoma
Mescalero Apache Tribe

PREPARER

Thomas C. Alex, Archeologist/Section 106 Coordinator, National Park Service – Big Bend National Park, Texas

CONSULTANTS

National Park Service, Intermountain Regional Office, Denver
Vicky Jacobson, Historical Architect, Head of Mission 66 review panel

LIST OF ENVIRONMENTAL ASSESSMENT/ASSESSMENT OF EFFECT RECIPIENTS

The following agencies, organizations, and groups were sent copies of the Environmental Assessment/ Assessment of Effect:

Federal Agencies
Advisory Council on Historic Preservation
U.S. Department of the Interior - Fish and Wildlife Service

State Agencies
Texas Historical Commission

Associated American Indians

Apache Tribe of Oklahoma
Blackfeet
Comanche Tribe of Oklahoma
Kickapoo Traditional Tribe of Texas
Kiowa Tribe of Oklahoma
Mescalero Apache Tribe
Ysleta del Sur Pueblo

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2000b *Management Policies, 2001*. Copy available at Big Bend National Park.

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Appendix 1

News Release
&
Public Service Announcement

February 23, 2005

Big Bend National Park News Release

BIG BEND NATIONAL PARK SEEKS COMMENTS ON PANTHER JUNCTION VISITOR CENTER EXPANSION

Big Bend National Park proposes to expand the Panther Junction Visitor Center to accommodate present-day visitor demands. The expansion is intended to create additional bookstore, desk, and exhibit space that will allow us to better serve park visitors.

The Panther Junction Visitor Center was constructed in the 1950s and is no longer adequate, because visitation to the park has increased and the current bookstore is unable to accommodate the increased amount of literature that has been published on the Big Bend region. During peak winter months, holidays, and the weeks of spring break the visitor center is crowded to the point that visitor service is hampered by crowds, traffic flow, inadequate desk space, and grossly inadequate bookstore floor space.

This proposal would increase the existing visitor center from 1110 square feet to approximately 1740 square feet, a 57% increase. The expansion would occur on the eastern side of the building, in the location of the current handicap-accessible exterior restroom facilities. The expansion would be constructed in a style compatible with the current architectural style of the building. The expansion would require reconstructing the existing integral public restrooms, which would be made handicap-accessible and would be equipped with modern, efficient fixtures. Two new heating/cooling systems would replace the existing single original system, allowing for separate temperature control of the public and administrative spaces served by the existing system. New bookstore storage would be built behind the expanded public space, to replace and augment the existing bookstore storage space.

The National Park Service considers the Panther Junction Headquarters Building to be eligible for listing on the National Register of Historic Places because it was designed by a renowned architect. However, the building has not been formally determined eligible through consultation with the Texas State Historic Preservation Office, an action that would occur via the environmental assessment process.

An Environmental Assessment for the visitor center expansion will be prepared in compliance with the National Environmental Policy Act (NEPA) to provide the decision-making framework that 1) analyzes a reasonable range of alternatives to meet project objectives, 2) evaluates potential issues and impacts to park resources and values, and 3) identifies mitigation measures to lessen the degree or extent of these impacts.

The National Park Service encourages public participation throughout the Environmental Assessment process. The National Park Service is currently in the scoping phase of this project, and invites you to submit your written comments to the address below. Following receipt of these comments, an Environmental Assessment will be prepared, at which time the public will be provided another opportunity to comment on the project. Please provide all comments by March 24, 2005 to:

Superintendent
P.O. Box 129
Big Bend National Park, TX 79834

Letter Sent

During Public Scoping

February 23, 2005

L7619 (7137)

February 23, 2005

Dear Interested Party:

Big Bend National Park proposes to expand the Panther Junction Visitor Center to accommodate present-day visitor demands. The expansion is intended to create additional bookstore, desk, and exhibit space that will allow us to better serve park visitors.

The Panther Junction Visitor Center was constructed in the 1950's and is no longer adequate, because visitation to the park has increased and the current bookstore is unable to accommodate the increased amount of literature that has been has been published on the Big Bend region. During peak winter months, holidays, and the weeks of spring break the visitor center is crowded to the point that visitor service is hampered by crowds, traffic flow, inadequate desk space, and grossly inadequate bookstore floor space.

This proposal would increase the existing visitor center from 1110 square feet to approximately 1740 square feet, a 57% increase. The expansion would occur on the eastern side of the building, in the location of the current handicap-accessible exterior restroom facilities. The expansion would be constructed in a style compatible with the current architectural style of the building. The expansion would require reconstructing the existing integral public restrooms, which would be made handicap-accessible and would be equipped with modern, efficient fixtures. Two new heating/cooling systems would replace the existing single original system, allowing for separate temperature control of the public and administrative spaces served by the existing system. New bookstore storage would be built behind the new public space, to replace and augment the existing bookstore storage space, which would be consumed by the reconstructed public toilets.

The National Park Service considers the Panther Junction Headquarters Building to be eligible for listing on the National Register of Historic Places because it was designed by a reknowned architect. However, the building has not been formally determined eligible through consultation with the Texas State Historic Preservation Office, an action that would occur via the environmental assessment process."

An Environmental Assessment for visitor center expansion will be prepared in compliance with the National Environmental Policy Act (NEPA) to provide the decision-making framework that 1) analyzes a reasonable range of alternatives to meet project objectives, 2) evaluates potential issues and impacts to park resources and values, and 3) identifies mitigation measures to lessen the degree or extent of these impacts.

The National Park Service encourages public participation throughout the Environmental Assessment process. The National Park Service is currently in the scoping phase of this project, and invites you to submit your written comments to the address below. Following receipt of these comments, an Environmental Assessment will be prepared, at which time the public will be provided another opportunity to comment on the project. Please provide all comments by March 15, 2005 to:

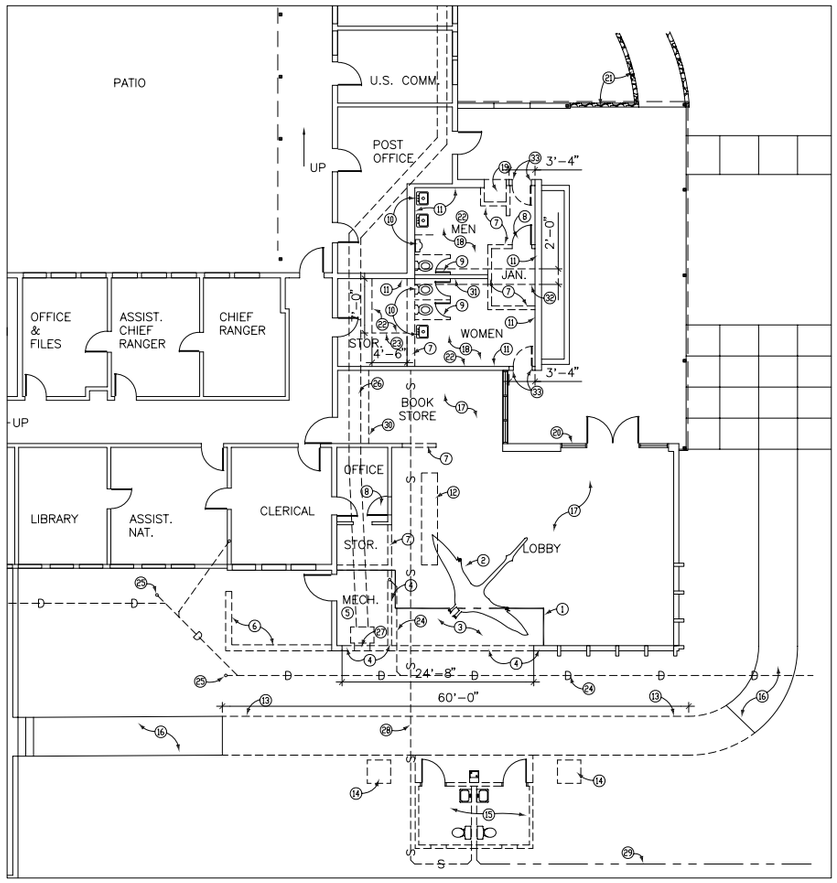
Superintendent
P.O. Box 129
Big Bend National Park, TX 79834

Sincerely,

John H. King

Graphics

Sheet A1, Administration Building Existing Floor Plan—Demolition



EXISTING FLOOR PLAN – DEMO

SCALE Ⓐ

LEGEND:

- TEMPORARY CONSTRUCTION BARRICADE
- EXISTING WALL TO REMAIN
- EXISTING CONSTRUCTION TO BE REMOVED
- EXISTING STORM DRAIN TO REMAIN
- EXISTING SEWER LINE TO REMAIN

KEYED NOTES:

1. TEMPORARY PLYWOOD OR 6 MIL. VISQUENE FULL HEIGHT BARRICADE – VERIFY CONFIGURATION WITH CONTRACTING OFFICER.
2. EXISTING DINOSAUR IMAGE. CONTRACTOR TO "AS-BUILT" DIMENSION LAYOUT OF IMAGE BASED ON 3'x3' CARPET TILES, PRIOR TO REMOVING CARPET. IMAGE TO BE TRANSFERRED TO NEW CARPET TILES BY CARPET MANUFACTURER.
3. DEMO PORTION OF EXISTING CEILING THIS AREA FIRST FOR INSTALLATION OF TEMPORARY STRUCTURAL SUPPORT – SEE STRUCTURAL.
4. SAW CUT AND REMOVE MASONRY WALL FROM FINISH FLOOR TO 8'-8" A.F.F.
5. SEE MECHANICAL/ELECTRICAL FOR DEMOLITION WORK THIS ROOM.
6. EXISTING CMU SCREEN WALL TO BE REMOVED.
7. EXISTING WALL WALL TO BE REMOVED.
8. EXISTING DOOR, DOOR FRAME TO BE REMOVED. VERIFY WITH CONTRACTING OFFICER ANY DOOR HARDWARE TO BE SALVAGED TO PARK SERVICE.
9. EXISTING TOILET AND URINAL PARTITIONS TO BE REMOVED.
10. PLUMBING FIXTURES TO BE REMOVED – SEE MECHANICAL.
11. EXISTING WALL TO REMAIN. REMOVE WALL FINISHES TO EXISTING STRUCTURE.
12. REMOVE EXISTING CASEWORK – SCHEDULE REMOVAL WITH CONTRACTING OFFICER.
13. SAW CUT AND REMOVE EXISTING CONCRETE SIDEWALK.
14. EXISTING STONE MONUMENT/PLAQUE TO BE REMOVED.
15. EXISTING COMFORT STATION TO BE DEMOLISHED AND REMOVED – SEE MECH./ELEC./CIVIL FOR DEMOLITION OF UTILITIES.
16. EXISTING SIDEWALK TO REMAIN.
17. DEMO EXISTING 12" X 12" ACOUSTICAL CEILING TILES AND GYP. BD. SUSPENDED CEILING.
18. REMOVE GYP. BD. CEILING.
19. EXISTING POSTAGE STAMP VENDING MACHINE AND FRAME ENCLOSURE TO BE REMOVED AND RELOCATED. COORDINATE WITH CONTRACTING OFFICER AND U.S. POSTAL SERVICE, TEMPORARY STORAGE OF UNIT PRIOR TO REINSTALLATION.
20. REMOVE WINDOW GLAZING AND ALUMINUM STOPS IF POSSIBLE. NUMBER EACH PIECE IN RESPECT TO REMAINING ALUMINUM WINDOW FRAME AND TURN OVER TO PARK SERVICE. FILL ALL SCREW HOLES. PREPARE OPENING FOR "IRON RANGER" AUTOMATED FEE COLLECTION SERVICE.
21. EXISTING STONE MARKED PATHWAY TO REMAIN.
22. SAWCUT AS CLOSE AS POSSIBLE TO REMAINING WALLS AND THICKENED CONCRETE FLOOR SLAB AND REMOVE SLAB. COORDINATE UTILITY DEMOLITION WITH MECHANICAL.
23. SAWCUT AND REMOVE CONCRETE FLOOR SLAB FOR NEW PLUMBING FIXTURES. SEE NEW FLOOR PLAN.
24. EXISTING ROOF DRAIN TO REMAIN. SEE MECHANICAL FOR RE-ROUTING OF STORM DRAIN LINE.
25. EXISTING ROOF DRAIN CLEANOUT. SEE MECHANICAL FOR RE-ROUTING.
26. EXISTING RETURN AIR DUCT – SEE MECHANICAL.
27. DEMO FOUNDATION WALL TO TIE INTO NEW HVAC DUCT. CONTRACTOR TO VERIFY LOCATION IN FIELD.
28. EXISTING SEWER LINE TO REMAIN – SEE MECHANICAL.
29. DEMO WATER LINE AND CAP.
30. DEMO GYP. BD. DUCT FURR DOWN.
31. EXISTING LOAD BEARING WALL AND THICKENED CONCRETE FLOOR SLAB TO REMAIN. REMOVE FINISHES, REFINISH AS SCHEDULED.
32. THICKENED CONCRETE FLOOR SLAB TO REMAIN. CONTRACTOR TO SAW CUT UP TO IT AND REMOVE SLAB.
33. REMOVE EXIST. DOOR & FRAME. SAW CUT EXISTING CONCRETE WALL FACADE TO ACCOMODATE 3'-4"x7'-4" HOLLOW METAL DOOR FRAME AND 3'-0"x7'-0" HOLLOW METAL DOOR.

GENERAL NOTES:

A. ALL FREE STANDING CASEWORK AND DISPLAYS TO BE REMOVED BY PARK SERVICE PRIOR TO CONSTRUCTION.

B. BUILDING WILL REMAIN OPEN DURING CONSTRUCTION. CONTRACTOR WILL DEVELOP A SCHEDULE FOR DEMOLITION AND NEW CONSTRUCTION /RENOVATION FOR APPROVAL BY CONTRACTING OFFICER AND PARK STAFF. WORK WILL BE DONE IN PHASES WITH THE ADDITION CONSTRUCTION FIRST PHASE, RENOVATION OF RESTROOMS, LOBBY, ETC. TO BE ADDITIONAL PHASE(S) AS DETERMINED BY CONTRACTING OFFICER AND NPS STAFF.

SCALE Ⓐ 8 0 8 16 1/8" = 1'-0"

SCALE OF FEET

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
DRAWN	A1	ADMINISTRATION BUILDING EXISTING FLOOR PLAN – DEMO	155 80,073
TECH. REVIEW:		BIG BEND NATIONAL PARK PANTHER JUNCTION	PKG. NO. — — —
DATE: 06/28/05			SHEET 7 OF 25

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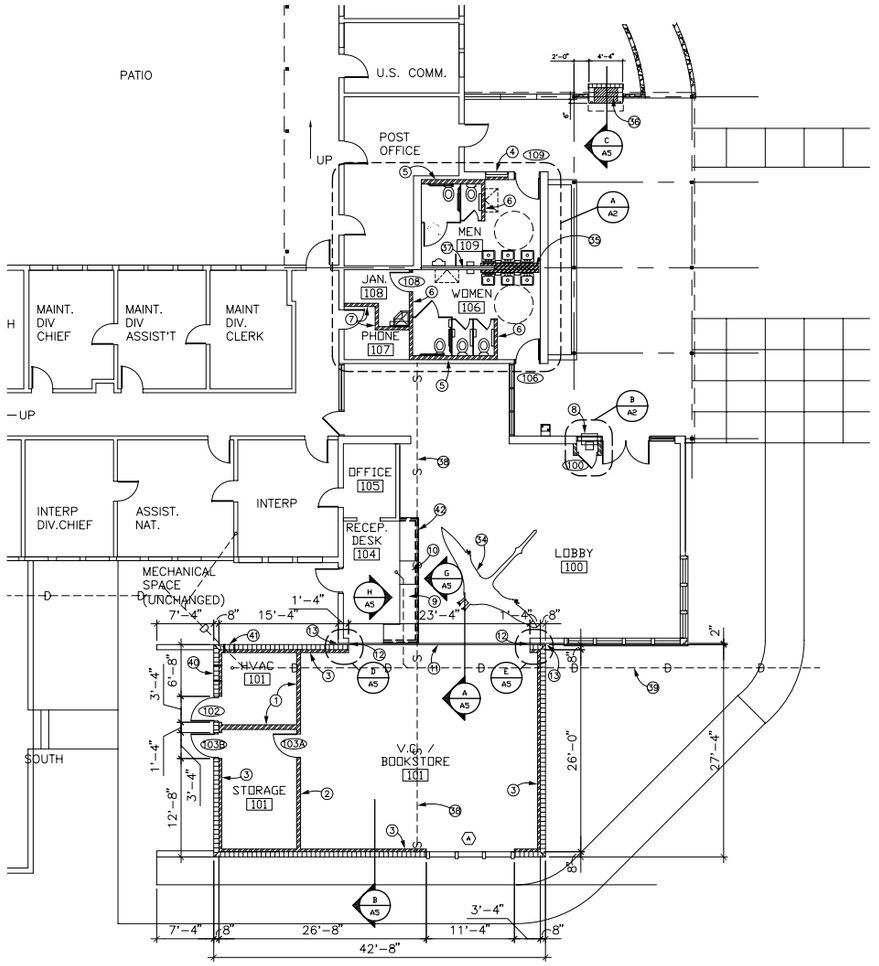
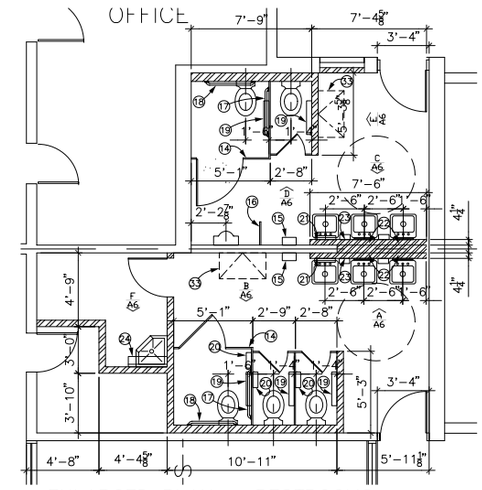
Graphics

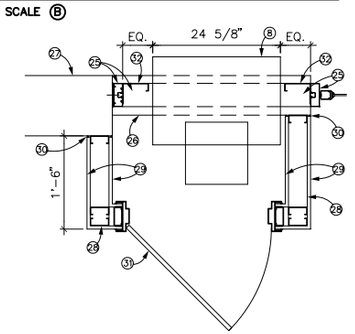
Sheet A2, Administration Building Addition/Renovation



FLOOR PLAN
SCALE (A)



(A/A2) ENLARGED PLAN – RESTROOMS
SCALE (B)



(B/A2) ENLARGED PLAN – IRON RANGER
SCALE (C)

KEYED NOTES (CONT.):

39. EXISTING STORM DRAIN TO REMAIN, SLEEVE THROUGH NEW FOUNDATION.
40. LOUVER – SEE MECHANICAL.
41. EXHAUST FAN – SEE MECHANICAL.
42. 2–1/2" MTL. STUD WALL W/5/8" PLYWOOD/PLASTIC LAMINATE FINISH (PUBLIC SIDE) AND 5/8" GYP. BD. FINISH INSIDE AT OPEN SPACES.

KEYED NOTES:

1. 1 HR. RATED FULL HEIGHT 3 5/8" MTL. STUD 5/8" GYP. BD. TYPE 'X' BOTH SIDES UL–419.
2. FULL HEIGHT 3 5/8" MTL. STUD 5/8" GYP. BD. BOTH SIDES.
3. FULL HEIGHT 3 5/8" MTL. STUDS W/ ONE LAYER 5/8" GYP. BD., WITH 3 1/2" BATT. INSULATION.
4. FILL IN EXISITNG OPENING WITH MASONRY BLOCK BASE AND CAST CONCRETE AGGREGATE PANEL ABOVE (MATCH EXIST. ADJACENT BLOCK & CONC. AGGREGATE) ON METAL STUD FRAMING, WITH 5/8" CEMENT BOARD, MASONRY TILES, BATT. INSULATION, 5/8" WATERPROOF GYP. BD.
5. 6" METAL STUD FRAMING (TERMINATE 6" ABOVE FINISH CEILING) WITH 5/8" WATERPROOF GYP. BD.
6. 3 5/8" METAL STUD FRAMING (TERMINATE 6" ABOVE FINISH CEILING), BRACE TO EXISTING STRUCTURE AS DIRECTED BY CONTRACTING OFFICER, 5/8" WATERPROOF GYP. BD. BOTH SIDES.
7. 3 5/8" METAL STUD FRAMING (TERMINATE 6" ABOVE FINISH CEILING), BRACE TO EXISTING FRAMING AS DIRECTED BY CONTRACTING OFFICER, 5/8" WATERPROOF GYP. BD. ON 'WET' SIDE, 5/8" GYP. BD. 'DRY' SIDE.
8. NPS FURNISHED 'IRON RANGER', MODEL MV–1, FEE COLLECTION SERVICE VENDOR, CONTRACTOR INSTALL. SEE ELECTRICAL FOR SERVICE.
9. PLASTIC LAMINATE RECEPTION COUNTER.
10. ADA TRANSACTION COUNTER.
11. FLOOR EXPANSION JOINT COVER.
12. WALL EXPANSION JOINT COVER.
13. EXTERIOR WALL EXPANSION JOINT.
14. FLOOR MOUNTED OVERHEAD BRACED TOILET PARTITIONS.
15. WALL MOUNTED ELECTRIC HAND DRYER – SEE ELECTRICAL.
16. WALL MOUNTED FLOOR BRACED URINAL SCREEN.
17. 42" GRAB BAR.
18. 36" GRAB BAR.
19. JUMBO TOILET TISSUE DISPENSER.
20. SANITARY NAPKIN DISPOSAL.
21. ADA TILT MIRROR.
22. STANDARD MIRROR.
23. SOAP DISPENSER.
24. CUSTODIAN UTILITY SHELF W/ MOP HOLDER.
25. EXISTING ALUMINUM STOREFRONT FRAME TO REMAIN.
26. EXISTING CMU BLOCK WALL BELOW WINDOW FRAME.
27. EXISTING CMU BLOCK WALL.
28. 3 5/8" MTL. STUD FRAMING.
29. 5/8" GYP. BD. BOTH SIDES – TAPE, TEXTURE, PAINT.
30. SEALANT.
31. DOOR AS SCHEDULED.
32. CONTINUOUS 24 GA. BREAK METAL CLOSURE PANEL. MOUNT TO WINDOW FRAME W/ NEOPRENE GASKET BETWEEN FRAME AND CLOSURE PANEL USING EXISTING WINDOW FRAME SCREW HOLES. CONTRACTOR TO FIELD VERIFY PAINT COLOR OF CLOSURE PANEL W/ CONTRACTING OFFICER.
33. WALL MOUNTED 'KOALA' BABY CHANGING TABLE.
34. 3' x 3' CARPET TILE DINOSAUR PATTERN.
35. NEW 3 5/8" METAL STUD WALL @ 16" O.C.
36. RELOCATED POSTAGE STAMP VENDING MACHINE. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS REQUIRED BY EQUIPMENT AND CONSTRUCT NEW 3 5/8" METAL STUD FRAME W/5/8" GYP. BD. FINISH INSIDE, 1/2" EXTERIOR SHEATHING W/CMU VENEER MATCHING BUILDING ON 4" THICK CONCRETE PAD. TOP TO BE 3 5/8" METAL STUDS WITH 5/8" PLYWOOD DECK SLOPE TO REAR OF ENCLOSURE 1", COVER WITH 24 GA. GALV. METAL WITH 4" METAL FASICA PAINTED TO MATCH EXISTING BUILDING FASCIA. CONTRACTOR TO COORDINATE CONSTRUCTION WITH CONTRACTING OFFICER.
37. EXISTING LOAD BEARING WALL REMAINING. CONTRACTOR TO FIELD VERIFY WIDTH PRIOR TO CONSTRUCTION OF ADDITIONAL NEW WALL CONSTRUCTION. CONTRACTOR TO REMOVE WALL FINISH FROM STUDS AND PREPARE TO RECEIVE NEW WALL FINISH AS SCHEDULED.
38. EXISTING SEWER LINE TO REMAIN, SLEEVE LINE THROUGH NEW FOUNDATION.

GENERAL NOTES:

A. CONTRACTOR WILL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, ETC. PRIOR TO STARTING CONSTRUCTION.

LEGEND:

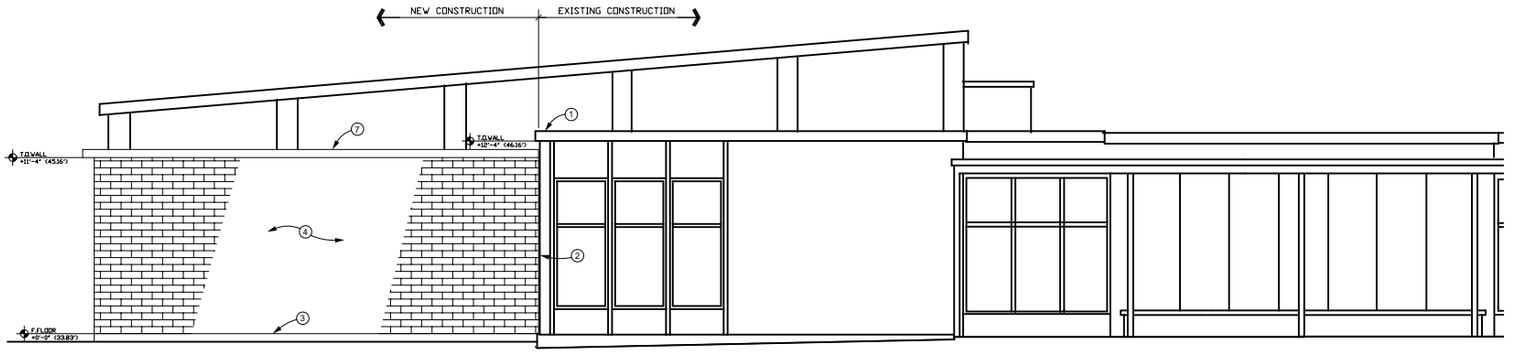
EXISTING WALL CONSTRUCTION
NEW MASONRY CONSTRUCTION
NEW METAL STUD GYP. BD. CONSTRUCTION
EXISTING STORM DRAIN
EXISTING SEWER LINE

SCALE (C) 1 0 1 2 — SCALE OF FEET — 1" = 1'-0"
SCALE (B) 4 0 4 8 — SCALE OF FEET — 1/4" = 1'-0"
SCALE (A) 8 0 8 16 — SCALE OF FEET — 1/8" = 1'-0"

DESIGNED: EADD TECH. REVIEW: DATE: 05/27/05	SUB SHEET NO. A2	TITLE OF SHEET ADMINISTRATION BUILDING ADDITION/RENOVATION BIG BEND NATIONAL PARK PANTHER JUNCTION	DRAWING NO. 155 80,073 PKG. NO. SHEET 8 OF 25

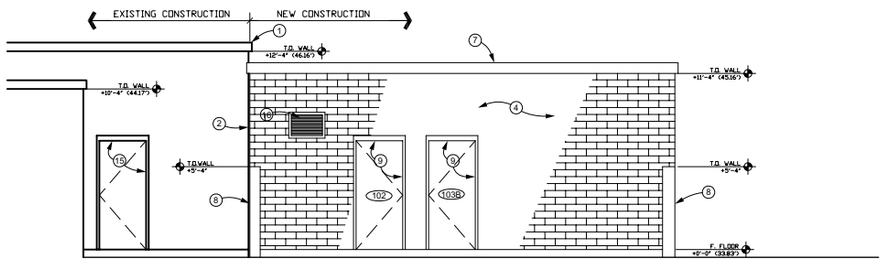
Graphics

Sheet A4, Administration Building Exterior Elevations



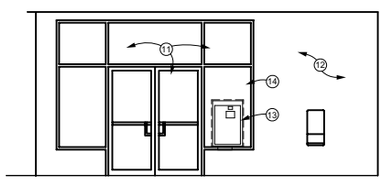
NORTHWEST ELEVATION

SCALE (A)



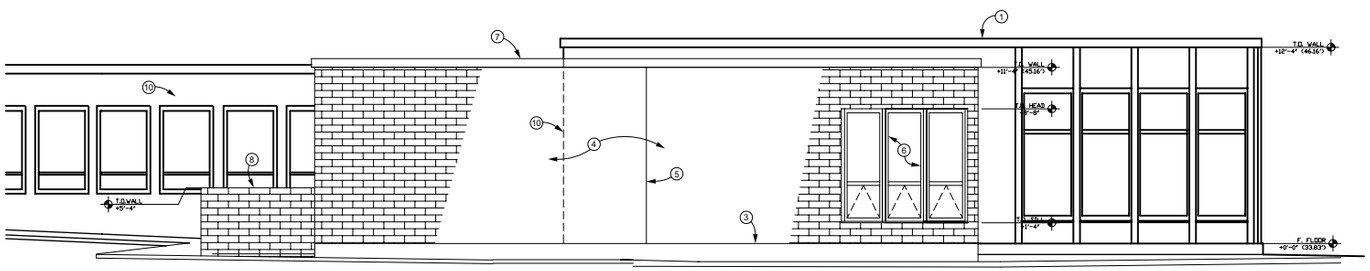
SOUTHEAST ELEVATION

SCALE (A)



FRONT ENTRANCE ELEVATION

SCALE (A)



NORTHEAST ELEVATION

SCALE (A)

KEYED NOTES:

1. EXISTING ROOF FASCIA TO REMAIN. CONTRACTOR TO PROTECT ROOF FASCIA DURING CONSTRUCTION.
2. 2" BUILDING EXPANSION JOINT.
3. EXPOSED CONCRETE FOUNDATION – PAINT TO MATCH EXISTING. CONTRACTOR TO FIELD VERIFY COLOR W/ CONTRACTING OFFICER.
4. NEW 4"x8"x16" CMU WALL CONSTRUCTION. CONTRACTOR TO FIELD VERIFY CMU COLOR AND TEXTURE TO MATCH EXISTING CONSTRUCTION W/ CONTRACTING OFFICER.
5. CMU CONSTRUCTION JOINT.
6. ALUMINUM STOREFRONT WINDOW SATIN ALUMINUM FINISH TO MATCH EXISTING, CONTRACTOR TO FIELD VERIFY.
7. METAL FASCIA PAINT TO MATCH EXISTING. CONTRACTOR TO FIELD VERIFY COLOR W/ CONTRACTING OFFICER.
8. 4"x8"x16" CMU SCREEN WALL W/ SOLID CAP BLOCK.
9. HOLLOW METAL DOOR AND FRAME – PAINT. CONTRACTOR TO FIELD VERIFYW/ CONTRACTING OFFICER COLOR.
10. EXISTING BUILDING BEYOND.
11. EXISTING ALUMINUM STOREFRONT TO REMAIN.
12. EXISTING CMU WALL CONSTRUCTION.
13. NPS FURNISHED 'IRON RANGER' MODEL MV-1, CONTRACTOR INSTALLED.
14. METAL CLOSURE PANEL – PAINT. CONTRACTOR TO FIELD VERIFY COLOR IN FIELD W/ CONTRACTING OFFICER.
15. EXISTING HOLLOW METAL DOOR AND FRAME.
16. MECH. LOUVER SEE MECHANICAL. PAINT COLOR TO MATCH CMU BLOCK AS APROVED BY CONTRACTING OFFICER

SCALE (A) 4 0 4 8 1/4" = 1'-0"

SCALE OF FEET

DESIGNED: EADD TECH. REVIEW: DATE: 05/27/05	SUB SHEET NO. A4	TITLE OF SHEET ADMINISTRATION BUILDING EXTERIOR ELEVATIONS BIG BEND NATIONAL PARK PANTHER JUNCTION	DRAWING NO. 155 80,073 PKG. NO. ___ ___ ___ SHEET 10 OF 25

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